

**AN EVALUATION
OF THE
CANADA-ONTARIO AGRICULTURAL
GREEN PLAN**

**Prepared For
Agriculture and Agri-Food Canada**

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EXECUTIVE SUMMARY

Background

The Canada-Ontario Agreement of the Agricultural Component of the Green Plan, an equally-shared Canada-Ontario program, was designed to encourage and assist farmers with the implementation of appropriate farm management practices within the framework of environmentally sustainable agriculture. It was delivered over a five-year period from 1992 to 1997. Under the Agreement, the federal component was delivered by Agriculture and Agri-Food Canada's Market and Industry Services Branch, from the Ontario regional office in Guelph.

The three objectives of the Green Plan were:

1. Conserving and enhancing the natural resources that agriculture uses and shares.
2. Minimizing the impact of the agri-food sector on environmental resources required by non-agriculture sector.
3. Protecting the agri-food sector from the environmental impacts caused by sectors and factors external to agriculture.

The Agriculture Green Plan in Ontario consisted of seven program areas, namely, Technology Transfer, Research, Best Management Practices, Rural Conservation Clubs, Wetlands/Woodlands/Wildlife, Stewardship Information Bureau and Environmental Farm Plans.

Evaluation Procedures

The program evaluation was conducted using an Evaluation Framework specified by the client. A work plan was developed and followed in conducting the data collection procedures.

The collection of data for the evaluation involved: a review of records, files and reports; and the use of 14 questionnaires with a total of 314 respondents. The personal, telephone and group interviews and mail surveys which were conducted are outlined below in the Data Collection Summary.

Data Collection Summary

	Programs								
Questionnaires	GP	TT	BMP	Research	WWW	CC	EFP	SIB	Total
Committees	14p								14
Manager & Staff		2p	3p	5p	2p 8t	4p 10t	4p	2p	40
BMP Writers			2p						2
Researchers				10t					10
WWW Participants Group					35m 3g 28				35 3-28
CC Type A Participants Group						5t 18m 2g 11			5 18 2-11
EFP Prog. Reps Technical Committee							12t 9t 65 m		12 9 65
SIB Extension Farmers								24t 45 m	24 45

Code: p - personal
t - telephone

m - mail
g - groups

The data were tabulated and analyzed to answer the various evaluation questions identified by the evaluation framework.

Evaluation Findings

Although the focus of the evaluation was the Green Plan, it became apparent that data would have to be collected, not about the Green Plan per se, but about each of the seven programs. The responses of those individuals who designed, delivered or participated in each program were presented for each evaluation issue. Only the overall summary for each evaluation issue is outlined below. For further details of responses regarding each program, see the body of the report.

The general findings for each evaluation issue were as follows:

1.0 Rationale

1.1 Were the program goals and objectives of the seven programs consistent with Green Plan environmental objectives?

A large majority of respondents had a copy of or claimed they were aware of their program goals. They believed their program goals were clearly specified, consistent with Green Plan goals and were appropriate. The consistency of responses indicates an unusually high awareness of and support for the program goals.

The program goals identified for the seven program areas were consistent with the Green Plan environmental objectives. We also determined that a high degree of awareness of these goals exists throughout the program delivery staff.

1.2 Were the operational objectives clearly specified and consistent with program goals?

The respondents overwhelmingly believed that the operational objectives of their work plan were clearly specified and consistent with program goals. They also claimed a high awareness of their work plans.

1.3 Was there a continuing need for each of the programs?

A need exists for programs which provide original research on agronomic and environmental problems as well as a system which communicates this and existing information to farmers and landowners. Farmers need both technical and management data. While the specific programs have not been evaluated, it is obvious that there are a very large number of landowners who have not yet adopted many of the known means of enhancing the environment. The EFP, BMPs, Conservation Clubs Type B and the WWW projects were innovative and demonstrated new ways to encourage farmers and landowners to better manage their soil and water resources.

2.0 Objective Achievement

2.1 Were the expected operational outputs, measures and targets clearly specified?

The operational outputs and measures were clearly specified but the actual numbers of participants were only specified for the Technology Transfer and EFP programs.

2.2 Were the program activities carried out as planned?

Based upon the evidence available, primarily self-reports, the programs were generally carried out as planned. A number of program delivery problems were identified but most did not jeopardize the overall success of the programs. The SIB was an exception in that it was not carried out as initially planned.

2.3 Within each program area, was there flexibility in responding to program needs and making adjustments?

A majority of respondents interviewed from each program believed there was adequate flexibility in responding to project needs and in making necessary adjustments.

2.4 How likely is it that the programs will achieve their objectives by March 31, 1997?

A relatively wide range of opinions were found as to the percentage of the program objectives expected to be achieved by the end of the program. About one-fifth of the respondents did not know or would not make an estimate. Most believed 71% or more of the objectives would be achieved. The most optimistic were the researchers, all of whom believed over 90% of their objectives would be achieved. The members of the three Committees were less optimistic than the others as half of those who made an estimate said 70% or less of the objectives would be achieved.

2.5 Has involvement with Green Plan activities introduced environmental considerations into normal business and program decision making by farmers?

The responses of the program participants provide very strong evidence that the farmers interviewed and those farmers observed by the program planning and delivery staff consider environmental issues when planning their farm activities. The consistently high level of consideration of environmental issues shown by the various respondents, especially by the farmers, indicates this objective is being achieved.

2.6 To what extent did participation in Green Plan activities influence participants' practices?

Participation in Green Plan programs had a major influence on the adoption of environmentally sustainable agricultural practices among participants. Among the Conservation Clubs and WWW participants, approximately 90% said the program influenced their adoption of new practices. The reports of over 80% of the Conservation Clubs staff and EFP local county committee members confirmed that their programs had also influenced farmer adoption of new practices.

3.0 Program Design and Delivery

3.1 How effective was the delivery approach of each program?

The various programs were delivered in different manners, some directly by AAFC, such as Research and Rural Conservation Clubs, some by third parties such as WWW, EFP and SIB. The others, Technology Transfer and BMPs, while partly financed as third party delivery activities, were completed by committees made up of AAFC and OMAFRA staff with the help of consultants.

Alternatives to various programs were proposed. The majority of respondents did not believe their program could be delivered at a lower cost. The Committee members suggested reducing the cost of the Research, EFP and BMP programs.

The interviewees, including managers, staff and participants, generally believed that their program delivery approach and the actual on-site delivery were quite effective. In most cases, a few individuals dissented. One of the most frequent complaints was that there was either too much administration or the administrative costs were too high.

3.2 Did the priority settings and fund allocation process lead to optimum environmental benefits within the given budget of \$25.6 million?

While we believe the priority setting and fund allocation are reasonable, there is no empirical means of determining, at a reasonable cost, the optimum environmental benefits. Additional funding of research on adoption and diffusion theory and training in extension methods was discussed.

The failure of the EFP program to meet their participation objectives and under utilization of grants could be considered the single largest error in allocation. These monies were later allocated to other programs mainly related to ground water management. The SIB was almost terminated early in the program but a decision was made to continue the Bureau. Closure

would have had relatively limited impact on either the overall program achievements or budget.

The Green Plan evaluation activities were not optimized because they were: late in starting; disjointed by the use of three consulting teams and changes in the evaluation design; underfunded; and, in the case of the benchmark survey, extremely rushed. The result is three evaluation studies which lack continuity because they each address very different issues and do not facilitate detailed measurement of the environmental benefits of the Green Plan or the seven programs.

3.3 Did the farmers have access to sufficient technical and economic information to determine the feasibility of adopting sustainable agricultural or environmental practices?

On the basis of the relatively consistent comments of the respondents, we conclude that the programs provided adequate technical information on various innovations. The generally perceived inadequacy of economic information is symptomatic of a long standing emphasis on the biological and technical characteristics of innovations at the expense of the economic costs and benefits. Greater emphasis should be given to the profitability of innovations as a means of encouraging their adoption.

3.4 Were there barriers to the adoption of sustainable agricultural and environmental practices which were not addressed by Green Plan?

The Green Plan programs did not address all barriers to adoption. The areas most frequently ignored were economic in nature. The lack of information on economic returns or implications of the practice, the cost of investing and the sources of financing were all cited by the respondents interviewed. The results are consistent with those found for the previous question.

3.5 What are the most appropriate indicators of an environmental program's success?

The respondents were able to differentiate between indicators of the success of an environmental program and those which are indicators of environmental improvements at the farm level. The answers provided tend to overlap quite a lot with slightly more specific innovations being identified as on-farm indicators.

The most frequently cited indicators of general and on-farm successes were: the level of adoption of specific innovations; measures of improvements in the environment such as water quality and achievement of program objectives. There was no consensus among the respondents on either question. The most obvious indicators appear to be measures of the extent to which a new practice or behaviour has been adopted or tried by the farmers and measures of changes in the environment.

4.0 Other Impacts and Effects

4.1 What unintended impacts and effects resulted from Green Plan activities?

Many unintended program effects were identified by the respondents. Others were apparent to the evaluation consultants from reading various reports and meeting with program personnel. Most of the unintended impacts were positive in nature and flow from the success of specific programs or activities. Some could have been anticipated but were not identified in advance because they were not objectives of the specific programs.

We believe the following positive impacts have occurred:

1. New Working Relationships Were Established

These developed within the agricultural industry, within rural communities, between rural and urban groups and between landowners and various government agencies and non-government agencies. These occurred within the three Accord Committees, during several programs and as a result of specific projects.

2. Existing Organizations Were Empowered

Third party delivery provided existing organizations with financial benefits and prestige. Rural Conservation Clubs and WWW projects gave local groups the opportunity to undertake useful projects. The OFA and OSCIA gained experience and credibility. This empowerment helped establish the socio/political environment which made the Agricultural Adaptation Council possible.

3. New Groups Were Created

The Rural Conservation Clubs and WWW Clubs brought people together at both the organizational and operational levels. A few of these will continue to undertake similar or new projects.

4. New Information Sources

The web site established at London by AAFC provides a new scientific source of environmental information which is available to rural and urban populations.

5. International Recognition

The EFP and BMPs have been recognized by and materials have been purchased by other Canadian provincial and foreign agencies.

6. New Environmental Policies

The on-farm fuel storage policies and regulations have been rewritten as the result of the EFP program.

The negative unintended impacts tended to be related to project failure or to be very situation specific. The impacts were relatively minor such as unhappiness with a contractor, excess geese and planting trees improperly.

5.0 Alternative Delivery Systems

5.1A Is there an alternative management structure which would have been more efficient or effective?

The management system was, as stated by the respondents, excessively complex, diffuse, slow and cumbersome. The system of three Committees plus an administrative officer, but not a manager was designed to provide high level involvement by the many stakeholders.

We believe the program would have benefited from the designation of a single program administrator who would have had primary responsibility for managing the Green Plan.

5.2 Is there an alternative delivery mechanism?

The opinions of the respondents regarding third party delivery were mixed with many people providing responses which indicate a limited understanding of all the potential cost factors or the level of actual costs. One cannot determine the incremental costs of third party delivery until such time as benchmark studies have been conducted on government delivery costs.

The extent to which third party delivery is effective depends upon the type of program being delivered and who the third party is. Third party delivery works best when the clients identify more closely with the third party than the first party. It also works better when the program is primarily action oriented, requires on-site delivery and is of intermediate technical requirements.

One consideration must be the degree of accountability. The first party needs to develop precise, measurable objectives which are agreed to by the delivery agency. The work activities of the third party should be monitored to assure performance. Accountability should be maintained in all situations even those of a political nature.

6.0 Future Directions

6.1 What are the environmental priorities of the agricultural sector?

Overall, the subjects or issues receiving the greatest number of mentions by the respondents were: soil conservation, management and quality; water quality, both surface and ground;

reduced pesticide use; waste management; and the protection of natural areas, habitats and the environment.

6.2 What are the respective roles of farmers, farm organizations and governments in responding to the agricultural sector priorities?

The respondents perceived the most important role of each to be:

AAFC - Research and development, program funding and policy development.

OMAFRA - Technical expertise, extension services, education, research and funding.

Farm Organizations

- Lobbying, education, program delivery and promotion.

Farmers - The adoption of environmentally sustainable practices, participate in protecting the environment and informing themselves and society of environmental issues.

Conclusions

1. The Green Plan can generally be considered a success. A body of new knowledge was created and several innovative means of delivering information to farmers were demonstrated.
2. The Green Plan facilitated the development of new alliances, relationships and partnerships.
3. The management structure would have been stronger and more effective if a single manager had been responsible for overall management control.
4. Third party and multiple party program delivery procedures were generally successful. The relative merits and costs of third party delivery cannot be determined until benchmark studies have been completed. Which types of programs can best be delivered to what clients under which circumstances should be determined.

5. There is a need to provide training programs for individuals who will manage future third party program delivery projects.
6. Additional work should be undertaken to capture information regarding the experiences of those people who delivered the Rural Conservation Clubs and WWW program.
7. Problems associated with the evaluation function were identified.

Recommendations

1. Future multi-program government initiatives should consider the designation of a full time program manager.
2. Third party program delivery should be investigated to ascertain comparative costs from existing records.
3. Suggestions for maintaining the accountability of third party delivery agencies are provided.
4. A study to determine the management and extension experiences of the Rural Conservation Clubs Type B projects and the WWW projects should be conducted.
5. A training program for third party program delivery staff should be developed.
6. Greater priority be given to research on technology transfer theory and extension training. Pertinent related diffusion, adoption and communication literature should be posted on the AAFC website.
7. The program evaluation function should be revised by giving this activity higher priority, having the same evaluator over the full time span of the program, maintain consistent procedures, increasing the level of financing and increasing awareness of evaluation procedures.

INTRODUCTION

Evaluation Background

The following evaluation was conducted under a contract awarded by Agriculture and AgriFood Canada. It was prepared during the final phases of the Agricultural Component of the Green Plan, using procedures based upon the general approach approved by the Treasury Board of Canada. It is based upon an evaluation assessment specified in the Request For Proposals prepared by the Program Evaluation Committee. The Statement of Work from the Request For Proposals may be found in Appendix 1.

Canada-Ontario Agriculture Green Plan

Green Plan Background

The Canada-Ontario Agreement of the Agricultural Component of the Green Plan, an equally-shared Canada-Ontario program, totalling approximately \$52M, was designed to encourage and assist farmers with the implementation of appropriate farm management practices within the framework of environmentally sustainable agriculture. It was delivered over a five-year period starting April 1, 1992 and ending March 31, 1997.

Under the Agreement, signed on September 21, 1992, the federal component was being administered by Agriculture and Agri-Food Canada's Market and Industry Services Branch, located at the Ontario regional office in Guelph. The matching contribution of the Ontario Ministry of Agriculture Food and Rural Affairs consisted of the Land Stewardship II Program.

While the evaluation was funded by Agriculture and Agri-Food Canada, in order to determine the results of their programs, it should be recognized that OMAFRA made a very substantial contribution to many of the programs. This was especially true of the Environmental Farm Plan, Best Management Practices and Technology Transfer programs. In each of the above programs, OMAFRA staff provided a large proportion of the technical expertise. To the best of our knowledge, the time spent by OMAFRA staff has not been tabulated so the full extent of their contribution is undocumented.

Green Plan Overview

The Canada-Ontario Agreement is a component of the Canada-Ontario Environmental Sustainability Accord Respecting the Agri-Food Sector (the Accord) that was designed to serve as an umbrella agreement under which federal-provincial environmental sustainability programs in agriculture were managed. The five program partners were Agriculture and Agri-Food Canada, Environment Canada, and the three Ontario Ministries of Agriculture Food and Rural Affairs, Environment and Energy and Natural Resources.

Under the provisions of the Accord, the Agreement was designed to facilitate the implementation of a number of environmental sustainability activities to achieve the three Green Plan objectives, namely:

1. Conserving and enhancing the natural resources that agriculture uses and shares.
2. Minimizing the impact of the agri-food sector on environmental resources required by non-agriculture sector.
3. Protecting the agri-food sector from the environmental impacts caused by sectors and factors external to agriculture.

The Agriculture Green Plan in Ontario addresses the issues of soil quality, water quality, wildlife habitat, waste and pollution by means of seven program areas, namely, Research, Technology Transfer, Best Management Practices, Rural Conservation Clubs, Environmental Farm Plans, Wetlands/Woodlands/Wildlife and the Stewardship Information Bureau. A short overview of each may be found in Appendix 2. The various acronyms and abbreviations used in this report are listed in Table 1.

Table 1. List of Acronyms

Agency/Organizations/Committees

AAFC	- Agriculture and Agri-Food Canada
AFDB	- Agri-Food Development Branch (now MISB)
CA	- Conservation Authority
CWS	- Canadian Wildlife Service, Environment Canada
CFFO	- Christian Farmers Federation of Ontario
EC	- Environment Canada
FON	- Federation of Ontario Naturalists
IFAO	- Innovative Farmers Association of Ontario
MISB	- Marketing and Industry Services Branch
OFA	- Ontario Federation of Agriculture
OASCC	- Ontario Agricultural Services Co-ordinating Committee
OEFC	- Ontario Farm Environmental Coalition
OMAFRA	- Ontario Ministry of Agriculture Food and Rural Affairs
OMEE	- Ontario Ministry of Environment and Energy
OMNR	- Ontario Ministry of Natural Resources
OSCIA	- Ontario Soil and Crop Improvement Association
UTRCA	- Upper Thames River Conservation Authority
TFIO	- The Fertilizer Institute of Ontario

Program-Related

AMC	- Agreement Management Committee
BMP	- Best Management Practices
COESA	- Canada-Ontario Environmental Sustainability Accord
EFP	- Environmental Farm Plans
ESI	- Environmental Sustainability Initiative
GLWQA	- Great Lakes Water Quality Agreement
LMAP	- Land Management Assistance Program
LSP	- Land Stewardship program
NSCP	- National Soil Conservation Program
RAP	- Remedial Action Plan
RCC	- Rural Conservation Clubs
SIB	- Stewardship Information Bureau
TT	- Technology Transfer
SWEEP	- Soil and Water Environmental Enhancement Program
3W/WWW	- Wetlands/Woodlands/Wildlife

Budget

The budget of the Green Plan is shown in Table 2.

Table 2. Final Budget and Expenditures

	Budget	Expenditures
Research:		
Nutrient Management	\$ 3,586,800	\$8,761,300
On-Farm Research	2,457,800	
Resource Monitoring	1,672,200	
Research Administration	<u>1,407,000</u>	
Sub-Total	\$ 9,123,800	
Environmental Farm Plans:		
Environmental Farm Plans Delivery	\$ 3,860,000	\$ 8,757,400
Agricultural Practices Incentives	<u>5,740,000</u>	
Sub-Total	\$ 9,600,000	
Technology Transfer		
Information Centre	\$ 880,000	\$ 884,500
Rural Conservation Clubs		1,699,900
Best Management Practices	3,027,300	860,000
Technology Transfer	<u></u>	<u>433,300</u>
Sub-Total	\$ 3,907,300	\$ 3,877,700
Wetlands/Woodlands/Wildlife	\$ 2,161,500	\$ 1,837,900
3W Administration	249,000	336,500
Other	<u></u>	<u>96,700</u>
Sub-Total	\$ 2,410,500	\$ 2,271,100
Administration		
Communications		\$ 25,000
Audit & Evaluation	\$ 1,155,100	200,000*
Administration		326,900*
Other	<u></u>	<u>265,000</u>
Sub-Total	\$ 1,155,100	\$ 816,900
Total	\$26,196,700	\$24,484,400
* Estimated		

Evaluation Overview

The evaluation design used to complete the study was based upon the one outlined in the Request For Proposals. This differed from the evaluation assessment prepared during Phase I which included a survey to replicate the baseline survey conducted in 1994. The findings of the Phase I evaluation were not used in conducting this evaluation due to the differences in design. The evaluation draws primarily upon: a review of records, files, the minutes of Committee meetings and reports; and a survey which involved the use of 14 questionnaires with a total of 317 respondents. The personal, telephone and group interviews and mail surveys which were conducted are identified in Table 3, Data Collection Summary.

Table 3. Data Collection Summary

	Programs								
Questionnaires	GP	TT	BMP	Research	WWW	CC	EFP	SIB	Total
Committees	14p								14
Manager & Staff		2p	2p	5p	2p 8t	4p 10t	3p	2p	38
BMP Writers			2p						2
Researchers				10t					10
WWW Participants Group					35m 3g 28				35 3-28
CC Type A Participants Group						5t 18m 2g 11			5 18 2-11
EFP Prog. Reps Technical Committee							12t 9t 65m		12 9 65
SIB Extension Farmers								24t 45m	24 45

Code: p - personal
t - telephone

m - mail
g - groups

EVALUATION PROCEDURES

Evaluation Framework

The evaluation framework is based upon the one in the Request For Proposals. A work plan was developed in the format of an evaluation assessment which included an evaluation issues framework, a data collection framework, a list of questions to be asked of the various respondents and a time schedule. The work plan was discussed with the client and a detailed data collection plan was prepared. This was approved by the client. It should be noted that the evaluation's Statement of Work did not include an analysis of each of the seven programs, just an evaluation of the overall Green Plan. Given the unique nature of the seven program, we believe it was essential to ask questions in relation to the programs rather than the overall Green Plan.

While it was difficult to aggregate the results of the seven programs, we do not believe it would have been possible to accurately address the evaluation issues and questions identified in the Request For Proposals in any other manner. The resulting evaluation does not draw conclusions about each of the seven programs because the Statement of Work did not request it and substantially more detail would have been required which was beyond the resources available.

Questionnaires were designed and pretested with appropriate populations of individuals. Given the fact that there were seven programs, each of which is relatively distinct, it meant that the questionnaires had to be program specific. A questionnaire was designed for interviewing the members of the two management committees, namely, the Accord and Accord Management Committees and the Stakeholders Advisory Committee.

A questionnaire was designed for use with the managers and/or staff of the various program so the questions asked would be consistent. Questionnaires were also designed for: researchers; best management practices writers; two types of Stewardship Information Bureau users, OMAFRA extension personnel and farmers; WWW participants; two types of Conservation Clubs participants; and three different Environment Farm Plan questionnaires

were prepared for the Program Representatives, Committee Members and OMAFRA Technical Advisors who assisted with the workshops.

Short questionnaires were also developed for use with the Conservation Club and WWW group participants. The total number of questionnaires and the number of respondents are summarized in Table 3.

Data Collection

Sampling Lists

Lists of Committee members, key respondents, program managers and program participants were compiled with the assistance of the client and program administrators. Personal and telephone interviews were completed as summarized in Table 3. We received excellent response from those contacted directly. Our only difficulty was that we were not always able to interview as many individuals as anticipated because many of the OMAFRA soils and crop extension personnel were involved in more than one program.

There was substantial duplication in terms of the OMAFRA staff who participated in the preparation of best management practices and technology transfer activities and were technical advisors to the Environmental Farm Plan. We wanted interview these specialists in relation to their use of the Stewardship Information Bureau. Each individual was only interviewed once regardless of their involvement with more than one program. We interviewed almost all the available OMAFRA technical staff who had participated in one or more components of the Green Plan.

We found we were unable to interview as many Rural Conservation Club and WWW project leaders as we planned because several individuals led more than one project. A small number had also moved outside the province or were not accessible. The four mail surveys had the response rates indicated below.

EFP Committee Members	47%
SIB (Innovative Farmers)	38%
WWW Participants	25%
Conservation Club Participants	17%

Two separate letters were mailed by OSCIA to the EFP Committee members. A follow-up letter was sent to all Conservation Club participants thanking them for participating and asking those who had not replied to do so.

We have a high degree of confidence in the representativeness of the interviews conducted with the three Committee, the various program and project managers, the researchers and the OMAFRA technical staff. In all these cases, we interviewed a high proportion, over 80%, of the potential respondents.

The validity of the results of the four mail surveys are much harder to evaluate. The response rates for the EFP Committee Members who reviewed the Action Plans and the Innovative Farmers who commented on the Stewardship Information Bureau were in the 47% and 38% range. This is an acceptable level for mail surveys. The response rates for the WWW and the Rural Conservation Clubs participants were 25% and 17% respectively. These rates are disappointing and lead us to treat the findings with greater caution than the results of the other surveys.

In the Program Manager and Project Staff questionnaire, we included questions regarding the program's organizational structure and third party delivery which, in retrospect, were outside the area of personal involvement of some respondents. Only the responses of those who had a working knowledge of these two issues were tabulated and included in the analysis.

Data Tabulation

The questionnaires were checked and tabulated. Given the small number of most questionnaires, only the EFP and SIB mail survey groups were entered in the computer.

Other Data Sources

We acquired information regarding the Green Plan from the minutes of all Committee meetings, reports, project files and the internet.

EVALUATION QUESTIONS

Background

Introduction

Data regarding the evaluation questions was collected by means of 14 questionnaires used to interview the: Accord, Advisory and Management Committee members; the program managers; project staff; and program participants of the seven programs. The number of questionnaires completed for each program is shown in Table 3.

The evaluation questions in the Request For Proposals were expanded upon and modified slightly, for example, a few were renumbered to follow a more logical sequence. The wording of some of the questions had to be modified to fit the specific situation about which the respondents were being asked.

The 14 members of the Accord, Advisory and Management committees were asked about the Green Plan or the various programs in general. The other respondents were asked about one of seven program they were most involved with. Many of the project staff, those who implemented projects at the field level, had very limited knowledge of the Green Plan in general or of the six programs they were not delivering. Several local project staff were unaware of the formal organizational structure of either the Green Plan or their own program. Most program participants had limited opportunity to be involved or know about other projects.

The wide variation in awareness, knowledge and participation in the Green Plan and its component programs created substantial variations in the number of persons answering each evaluation question and in the answers given to the questions. These differences between programs were, as would be expected, greater between than those within programs.

The evaluation questions section has been prepared utilizing the responses of the various members of the three administrative committees, program managers and project staff and participants. For each program, except Technology Transfer, two or more questionnaires were utilized, usually one for managers and staff and one for participants. In some cases, for example, the Environmental Farm Plan, four were required due to different types of staff.

The responses of various interviewees are presented, by program, for each of the research questions developed in our work plan. These responses are summarized for each of the evaluation questions in the Request For Proposals for all the respondents across all seven of the programs. Other data from records, files or our personal observations are included where deemed appropriate. Specific issues such as organizational structure, third party delivery and program specific and procedural issues are discussed in a later chapter.

Respondents

Committee Members - Fourteen members of the Accord, Management and Advisory Committee were personally interviewed using a common questionnaire. The responses of the three Committees are treated as a single group except if consistent differences in the responses of the Committees are observed.

Researchers - A sample consisting of the three individuals who managed the research program and 11 project managers, contract researchers or AAFC research staff were interviewed either in person or on the telephone. Two of the researchers were interviewed using the manager and staff questionnaires. Given that most of the questions in the two questionnaires were identical, this had a very limited impact on the findings.

Conservation Clubs - Nineteen individuals who managed or were project leaders for the Rural Conservation Clubs were interviewed in person or on the telephone. The 14 who directed B type projects were interviewed using the same questionnaire as the other program managers and project staff. The other five were interviewed with a Conservation Type A questionnaire. Since most of the questions are the same, the responses of both groups were combined.

Eighteen of the 106 Conservation Club participants returned a mail questionnaire which asked primarily about their specific project. Two group interviews were conducted with 11 project members. Their qualitative responses were used to better understand the opinions and experiences of the program participants.

Environmental Farm Plan (EFP) - Two program managers and a representative of AAFC were interviewed in person using the Program Manager and Project Staff questionnaire. Nine OMAFRA technical advisors who had participated in the EFP farm workshops were interviewed on the telephone using a questionnaire designed specifically for them. Two groups of EFP field staff were also interviewed. Twelve county program representatives who were responsible for recruiting participants and delivering the program were interviewed by telephone. Questionnaires were mailed to 137 county committee members. A total of 65 usable questionnaires, 47%, were returned. Note that no farmer participants were interviewed because of the desire of the EFP to maintain confidentiality.

Wetland Woodlands and Wildlife (WWW) - The program manager and four project staff were interviewed in person and a further five project staff on the telephone using the Program Manager and Project Staff questionnaire. A mail survey was conducted of 138 program participants of whom 34 returned usable questionnaires. Three group sessions were conducted at which 28 participants filled in a short questionnaire designed to structure their thinking in preparation for the group discussion. The group participants were not included in the mail survey.

Technology Transfer and Best Management Practices (TT/BMPs) - Since the Best Management Practices (BMP) program was initially subsumed under Technology Transfer for administrative purposes and because the total number of interviewees was only six, we have combined their responses. These two programs involve quite separate activities. Two technology transfer and two BMP respondents completed the Program Manager and Project Staff questionnaire. The remaining two BMP respondents completed the BMP Writers questionnaire which was quite similar except it did not include questions regarding the Green Plan management system.

Stewardship Information Bureau (SIB) - Two individuals who represented the third party delivery contractor, the University of Guelph, were personally interviewed. Twenty-four OMAFRA field staff with responsibilities for crop, soil and extension program delivery were interviewed on the telephone. A mail questionnaire was sent to 119 farmers and agribusiness representatives who were included on a list of members of the Innovative Farmers Association. A total of 45 usable questionnaires were returned for a response rate of 38%.

1.0 Rationale

Throughout this section of the evaluation, the responses of the various respondents are presented first, then any additional data acquired from the records, other reports, etc. are presented. The responses of the Committee Members are presented first, followed by the respondents associated with each of the seven programs. If data are not reported for a group or program, it means they were not asked about that specific issue.

A series of questions were used to measure the extent to which the objectives of the Green Plan, the seven programs and their constituent work plans had been specified. The distinction among goals, objectives, operational outputs and measures and differences among the Green Plan and the seven programs and site specific projects were confusing to the respondents. As a result, we limited our questions to those relating to the goals and objectives of Green Plan and the seven programs and to the details of their program work plan.

In each case the respondents were asked if they were aware of the written statement of goals, whether it clearly specified the objectives or action plans and if it was consistent with the Green Plan goals. Some of the program participants were not asked these questions when it became evident that most program participants were unable to answer the questions..

1.1 Were the goals and objectives of your program consistent with Green Plan environmental objectives and were they appropriate?

Committee Members

The 14 Committee members interviewed were asked about the Green Plan rather than specific programs. All, but one, of the respondents said they had a copy of the Green Plan

goals and objectives. Nine of the respondents said the goals and objectives of the Green Plan were clearly specified, one disagreed, two did not know and two did not give an opinion. The one member who did not believe the goals and objectives were clearly specified, agreed with the other nine that they were appropriate.

Researchers

Five research managers were interviewed using the Program Managers and Project Staff questionnaire and 10 researchers were interviewed with their own Researchers questionnaire. All of those who completed the manager questionnaire and all but two of the researchers had a copy of their program's objectives. The latter two were aware of the objectives. They were unanimous that the objectives of their program were clearly specified and consistent with Green Plan goals. Those who were asked, the managers, all agreed the objectives were appropriate.

Conservation Clubs

All of the 19 project leaders and staff except two had a copy of the program objectives. These two were aware of them, but did not have a copy. They were unanimous in believing the program objectives were clearly specified and consistent with Green Plan objectives. Eleven of the 14, who were managers or Club B staff, believed that they were appropriate.

Environmental Farm Plan (EFP)

Two of the three program managers, eight of the nine OMAFRA technical advisors and 11 of the 12 EFP program representatives had a copy of the goals and objectives of their program. In each of the three cases, the individual who did not have a copy claimed they were aware of the goals and objectives.

All of the managers believed the goals and objectives of their program were clearly specified, consistent with Green Plan goals and appropriate. All of the program reps and all, but one, of the OMAFRA tech advisors said the goal were clearly specified. The lone dissenter did not know. Only four of the 24 OMAFRA technical advisors were sure that the goals and objectives of this program were consistent with Green Plan goals. Ten of the Program Reps believed they were consistent. In some cases, the respondents indicated they were unsure of the Green Plan goals and objectives.

WWW

The 10 program staff were unanimous in their opinion that the goals and objectives of their program were clearly specified and consistent with Green Plan goals. Nine believed the goals were appropriate but one did not. Comments volunteered included: goals and objectives were very general and could have been targeted and the goals were reasonable but could have been written better. Nine of the 10 said they had a copy of the program goals and objectives and one said he did not have a copy but was aware of them.

TT/BMPs

All six of the respondents believed their program goals and objectives were clearly specified and consistent with Green Plan goals. Four have a copy of and the remainder were aware of the goals and objectives of their program. Both the Technology Transfer respondents asked said the goals and objectives were appropriate. This question was not included in an early draft of the Program Manager and Project Staff or the BMP Writers questionnaires.

SIB

Both the program staff have a copy of their goals and objectives and believe they are clearly specified and consistent with Green Plan goals. They both believe the goals and objectives were appropriate. One noted that the program goals have been modified over time by the work plans.

Other Data

A study was conducted to assist program managers and project staff to review their program objectives. This exercise, entitled Phase II Green Plan Evaluation - Detailed Program Descriptions Using Logic Matrices, September 1995 by FCS Inc.-International (FCS Report), assisted the program managers to systematically define their: program goals; planned outputs; expected impacts and effects; and measurable result indicators and targets. The consultant ensured that each program manager developed program goals and objectives which were consistent with Green Plan goals and objectives.

Summary

A large majority of respondents had a copy of or claimed they were aware of their program goals. They believed their program goals were clearly specified, consistent with Green Plan goals and were appropriate. The consistency of responses indicates a very high awareness

of and support for the program goals. Based on the responses, it can be concluded that the program goals identified for the seven program areas were consistent with the Green Plan environmental objectives. We also observed a high degree of awareness of these goals exists throughout the program delivery staff.

Our review of program objectives and comments by the respondents indicates that they are generally consistent with the three Green Plan objectives. We do not believe any of the programs undertook activities which cannot be subsumed under the three general objectives of the Green Plan.

1.2 Were the operational objectives of your work plan clearly specified and consistent with program goals?

Researchers

All of the five managers and eight of the 10 researchers have a copy of their project work plan. One of the latter group was aware of the plan and one did not reply. The respondents were unanimous in their belief that the objectives, expected operational outputs, measures and targets of their project work plan were both clearly specified and consistent with Green Plan goals.

Conservation Clubs

All but two of the 19 managers or project staff have a copy of their project work plan and those two were aware of it. They all believe the objectives, expected operational outputs, measures and targets were both clearly specified and consistent with Green Plan goals.

Environmental Farm Plan

All three of the project staff interviewed have a copy of their work plan, two believe the objectives, expected outputs, measures and target were clearly specified and all believe they are consistent with Green Plan goals. All 10 of the OMAFRA technical advisors and the 12 EFP program reps said a schedule or work plan was developed for their activities.

WWW

All 10 managers and staff had a copy of their work plan and believed the expected operational outputs, measures and targets of the work plan were clearly specified. Nine believed they were consistent with Green Plan goals.

TT/BMPs

All six of the respondents believed the objectives, expected operational outputs, measures and targets of their work plan were clearly specified and consistent with Green Plan goals.

SIB

The two staff members both have a copy of their work plan and believe the expected operational outputs, measures and targets are clearly specified and consistent with Green Plan goals.

Other Data

The analysis of program objectives undertaken by FCS Inc.-International ensured that the work plan objectives were clearly specified and consistent with program goals as of September 1995.

Summary

The respondents overwhelmingly believed that the operational objectives of their work plan were clearly specified and consistent with program goals. They also claimed a high awareness of their work plans.

1.3 Is there a continuing need for each of the programs?

While this question was not included in the Evaluation Issues and Questions in the Request For Proposals, it is a question frequently included in a program evaluation. We were uncertain as to where to locate this question but decided to put it with the other Rationale questions because it provides an indication of whether a need existed when the program was initiated. If no further need exists, it implies either a need never existed or it has been completely met. Given the nature of environmental issues, it is very improbable that a five-year program would solve all the problems.

Committee Members

The Committee members were asked if there was a continuing need for a program like Green Plan and, if so, what is required. All but one of the 14 of the Committee members said there is a continuing need for a program like Green Plan. The one dissenter said that it has done what it was put in place to do and another who, despite believing there was a need for a program, was unsure of the need to spend millions of dollars. The reasons why a program was needed as given by the majority included: a need to work on environmental goals on a continuing basis; still a need for further research; a need to encourage better stewardship practices and a need to focus on key elements of the environment.

When asked about the specific types of programs needed, the number claiming a need for each was as in Table 4. The members of the Management Committee held the most negative views about the SIB and Conservation Clubs while the Advisory Committee was less supportive of BMPs.

Table 4. Committee Members Perceptions of Need For Programs

Program	Yes	No	Unsure or No Reply	Total
Tech Transfer	14	0	—	14
B M P s	11	3	—	14
S I B	3	9	2	14
Conservation Clubs	8	5	1	14
W W W	14	0	0	14
E F P	14	0	0	14
Research	13	1	0	14

Researchers

All, but one, of the 14 researchers believe there is a continuing need for their program. Reasons given by the five who completed the Managers' Questionnaire were: always need for research; still have questions; cannot provide answers for whole province yet; need to incorporate the Green Plan data into the existing database and to archive it; longer time frame; and the program was designed to be ongoing.

Reasons given by the other 10 researchers included: not yet able to give farmers recipes for manure management (2); to evaluate biochemical soil quality indicators (2); still unsolved problems re management of organic nitrogen (2); changes in tillage, fertilizers and crop varieties; need more economic, ecosystem and fall zone tillage research; and need more ongoing monitoring and benchmarks.

Conservation Clubs

Among the five Type A Club project leaders, only one believed there was a continuing need for their program. The four who did not perceive a need pointed out that they have the information even if it is not conclusive, other things could be funded, a good cadre of innovative members will continue to make changes and help others adopt.

Among the Type B Club leaders, nine believe there is a continuing need and four do not. The reasons given for continuing the program included: need a longer time frame, ie. 5-10 years to evaluate changes or effects (5); need for more information along same lines (2); farmers want to try out new technologies; if a program is available, farmers will take advantage of it; and one said it is needed, not now, but every 3-4 years to keep farmers thinking.

Those who did not believe there is a need mentioned: the technology has been demonstrated and further research may not change anything (2); and maybe it should continue for other equipment, for example, manure is still an issue.

Fifteen of the 18 program participants believe there is a continuing need for projects of the type tried on their farm and two do not. The farmers want to evaluate new machinery further (4), need to continue to achieve reliable results (3), maintain interest and change the practices of members (2), expand the data base for economics of conservation tillage, save money on pesticides and to answer questions on variations experienced. Nine of the participants said they have decided to continue this project or practice next year, four will not and four did not reply. Those continuing cited the desire to experiment more, to continue it as a part of their normal crop rotation and the need to reduce tillage and maintain yields.

Environmental Farm Plan

There was consensus among the staff, technical advisors and program reps that a continuing need exists for the EFP. Among the 65 EFP committee members, all but one agree that a continuing need exists. The three groups of respondents all cite the fact that there are many farmers who have not yet participated. Two-thirds of the staff and technical advisors refer to the fact that relatively few of the farmers have enrolled. About 40% of the committee members and one-third of the program reps mentioned that most have not participated.

Other reasons for saying a need exists were: help preserve the environment, 26% of the committee members; and a need for a continuing push to avoid regulatory actions, one-third of the program representatives.

WWW

Nine of the 10 program staff believe there is a continuing need for their program and one was unsure. The reasons given were: still have people waiting to do things (2); need to involve more landowners to make an impact (2); lots of municipal drains require bank stabilization and improvement; no other program available to improve habitat; need to educate farmers that wetlands are assets, not liabilities; and need to give farmers incentives to implement practices for good of the environment and society.

The program participants were asked if there is a continuing need for projects of the type tried on their farm or property. Twenty-five said yes, two no and the remaining seven did not reply. The reasons given to justify continuation included: need for erosion control (5); to provide wildlife habitat (3); still have crop damage (goose project) (2); problems of cattle in streams still exist; to preserve the quality of rivers (2); land should be transferred to wildlife habitat (2); and to show other farmers what to do on their land.

IT/BMPs

All believe there is a continuing need for their program. The reasons given to explain why a need exists tended to be of three types: a need for more technical knowledge; the need to integrate the available information into units which can be communicated; and a need to promote actions. One pointed out that society should be prepared to pay for environmental improvements.

SIB

The staff respondents do not believe there is a need for this program as it presently exists. They mention that new challenges such as precision farming now exist. Among the 24 OMAFRA extension personnel interviewed, 20 believed there is a need for a SIB or similar agency to provide information on sustainable agriculture and environmental issues. Four do not agree. The most common reason given by 10 of the respondents was some variation of the need for an information source because of its convenience and to obtain other opinions or guidance.

Nine of the respondents agreed there was a need but want improvements such as amalgamation with other agencies, better marketing, a less complicated system or more reasonable costs. Three said the public needed access to this information. Those who did not believe a need existed said there was no need for a separate agency (2), information is available elsewhere or it duplicates other services (3).

Thirty-two farmers believed there is a need for the SIB or similar agency and eight do not. Eight pointed out that it is needed because of OMAFRA cut backs, seven because there is a need to keep farmers informed and the general betterment of the environment. Four emphasized that there is a need for a central information agency or service. Those who do not see a need said they didn't know about the SIB, there is adequate info available, leave it to agribusiness and they use another source.

Respondent Summary

The respondents were almost unanimous in believing a need existed for a program similar or identical to theirs. They usually justified the need by claiming that the majority of farmers have not adopted the practices that they are offering. Among the 14 Committee members the majority believed that the SIB was not needed. The need for Conservation Clubs was only supported by a slight majority, ie. 8 of 14. These two programs received the least support.

Other Data

There has been a longstanding question concerning the performance of and need for the Stewardship Information Bureau and its predecessor, the Conservation Information Bureau. The CIB suffered from institutional conflicts, inconsistent objectives and a lack of accountability.

Despite a move to a more accessible site, the SIB did not attract substantial use by farmers or extension personnel. We now believe that, in addition to a lack of direction, the SIB suffered from: spending too much time on developing a plan on how it could become self-financing; a lack of technical expertise; staff leaves of absence; the decision to limit the client base to only the very top farmers; and being overtaken by the development of easily accessible electronic systems such as the world wideweb.

A need will continue to exist for data banks containing up-to-date information on all aspects of agriculture and the environment. This need may, in future, be met by web sites such as the one developed by the Research Branch of AAFC at London, Ontario. Given the dynamic nature of electronic systems and the speed at which research data needs to be updated, it is extremely difficult to predict the form and function of a new information system. The most cost effective means of disseminating research findings is to put them on the AAFC and the OMAFRA web sites. It should be recognized that other communication channels are also required to reach those farmers who are not computer literate.

Summary

We conclude that a need exists for programs which provide original research on agronomic and environmental problems as well as a system which communicate this and existing information to farmers and landowners. Farmers need not only technical but also management data. The major environmental issues are identified by the various groups of respondents in Table 15, page 103. Given the need to address these environmental problems, the farmers, program delivery staff and administrators have a wide range of information, support and program delivery needs.

The need for additional research on technical issues is part of the conventional wisdom. The questions of who should decide what needs to be done and who should do the technical research are not as simple. Sections three and five provide information on these issues.

The need for extension programs is also generally accepted but much less empirical work has been done on how to communicate, persuade and encourage farmers to adopt technology than on developing new technology. While new communication materials such as BMPs, new vehicles such as web sites and new demonstration programs such as the Rural Conservation Clubs and WWW activities were utilized, they were not rigorously evaluated to determine when they work best with what types of audiences. An initial study was undertaken to investigate the design of messages to encourage the adoption of new practices. The need to inform technically trained researchers and extension personnel how to communicate their knowledge to farmers should be addressed by future programs.

Future programs should include systems for identifying and documenting what works best in what situations. This means that more emphasis on conducting field experiments such as those projects completed by the various Class B Rural Conservation Clubs and the WWW projects. Every demonstration project would benefit from a technical and a process (technology transfer) researcher. We are presently neither maximizing program impacts nor developing our knowledge of what works best under what circumstances with which farmers.

2.0 Objective Achievement

2.1 Were the expected operational outputs, measures and targets clearly specified?

Data

We reviewed the study by FCS Inc.-International which investigated the extent to which program outputs were clearly specified. We conclude from that report that all the programs specified operational outputs and measures. The only program in this report which specified

its targets in actual numbers or percentages of activities or populations involved was the Technology Transfer program. They specified about two-thirds of their targets in numeric terms. The evaluation design specified by the Request For Proposals did not result in the collection of survey data required to determine whether or not these targets were achieved.

A review of EFP program plans indicated that numeric objectives were prepared for the Pilot Project and for the actual program by the year 2000. The objectives in Our Farm Environmental Agenda was to have 40,000 farmers complete plans. A goal of 700-1,000 established for the Pilot Project. Later, this was reduced to having 500 farmers complete environmental plans, an objective not achieved. The goal established at the beginning of the EFP component of the Green Plan in 1994 was 11,000 farmers to attend workshops, 9,100 action plans to be reviewed and \$4,575,000 to be spent on grants for environmental projects.

The objective setting by the WWW program was less specific but a conscious decision was made in May 1993 for "fewer but larger" projects from among the 33 proposals. As a result of this decision, a total of 10 projects were funded.

A similar approach was taken for the Rural Conservation Clubs. It was recognized at an Accord Committee meeting in May 1992 that 250 small projects were not feasible from a management perspective. The Rural Conservation Clubs Program established two types of clubs, those that were province-wide or involved \$20,000 or more, Category A, and those which required less than \$20,000, Category B. In July 1993, the Accord Committee endorsed allocating \$2 million for Category A and \$500,000 for category B Clubs. The number of clubs funded was determined by the amount of money requested rather than on a predetermined number. The number of research projects was determined by a similar procedure with those projects rated highest being funded first.

The objectives of the remaining programs were not specified in numeric terms.

Summary

The operational outputs and measures were clearly specified but the targets, generally, were not.

2.2 How well were the programs delivered?

Given the scope of the evaluation, we had to depend upon the responses of those individuals who were involved with each program to answer this question. Since the Committee members generally were not directly involved in program delivery, they were not asked this question. In order to answer all aspects of program implementation, three separate questions were asked. The responses of the various interviewees follows.

2.2A Were the program activities carried out as specified in the program action plans?

Researchers

All of the research managers and eight of the 10 researchers said their work activities were carried out as planned. Four said they made slight adjustments. Reasons for the deviations included: need for specific data; lack of a lab technician; and wanted to create reproducible conditions.

Conservation Clubs

Fourteen of the project staff claimed their work activities were carried out as planned and five did not. Among the deviations reported were: changes in field research (5); scheduling or time delays (3); and no plots in 1996. Reasons for the deviations included: a problem getting data (3); a problem getting equipment (3); weather conditions (2); and construction contractors who failed to perform.

The participating farmers, when asked if any difficulties were experienced in completing their project, six said they had no problems, six said wet weather caused problems and one mentioned each of the following: lack of time; technical modification of equipment; late harvest; and lower yields. Three said their project was not completed due to weather and one still had to complete the final report and conclusions at the time of the survey.

Environmental Farm Plan

Two of the managers believed the program activities were carried out as specified in the action plan and one did not. Eight of the nine technical advisors and 10 of the 12 program reps agreed that the programs were carried out as specified

WWW

Seven believed that the work activities were carried out as planned and three did not. While several gave a positive response to this question, they followed up by stating: there were delays and adjustments in the budget; less complications than anticipated; and while the appropriate activities were carried out, they sometimes did not keep on schedule (2). Those who said their work activities were not carried out as planned said: did not meet a number of projections and reduced the number implemented; forecasts had to be adjusted for new clients; and change in administration and goals.

TT/BMPs

Four said their work activities were carried out as planned and two said they were not.

SIB

The respondents differed on whether or not the work plan activities were carried out as planned. One pointed out that the work plan had been modified in 1995 and the other said that it had mostly been carried out with some limitations.

2.2B Were alternative activities undertaken?

Researchers

It is not clear to what extent the deviations referred to above are alternative activities. No major changes were made in the program but some projects had to be altered in the field.

Conservation Clubs

Alternative activities identified by the project staff when explaining the deviations in their work plan included: changes in field research (5), redesigning plot plans and rescheduling.

Environmental Farm Plan

Among the deviations reported by managers were a shortfall in the number of workshop participants and the uptake of grants. The program reps say they modified the program slightly to suit the participants' needs by stressing those enterprises most common to the area and some introductory workshops were cancelled due to limited interest. The reasons for these deviations included: concern for confidentiality; inexperienced reps did not like to make projections; and the time to finish projects had not been estimated. The technical advisors did not identify alternative activities.

WWW

Alternative activities were carried out because of various occurrences. These included: took longer to find and clean up sites than anticipated; the original participant projections were overly ambitious; certain projects were not taken up; and the themes and content were not appropriate in a few cases.

TT/BMPs

The primary deviation in the programs were time delays. The reasons given for these delays were: the work took longer than expected; contractors did not live up to contractual arrangements; the scope of the project was underestimated; illness of a participant; the contractor was expected to do all the writing; budget adjustments were necessary; and had to rewrite part of the manure BMP so it was consistent with the OMAFRA position.

SIE

The alternative activities carried out involved updating the mailing list of the client network. Deviations were due to a change in management personnel, a need to update a data base which had been poorly managed and the decision to establish a web page.

2.2C Were the activities undertaken capable of achieving the planned objectives?

Committee Members

The Committee members were almost unanimous in believing the activities carried out were appropriate for achieving the Green Plan objectives. Among the wide range of reasons given

for believing so were: did most of what set out to do; encouraged farmers by means of incentives and technical resources; improved the environment within the agricultural community (2); created awareness and dealt practically with problems; created partnership; and allowed farmers to decide how to spend money. One Advisory Committee individual commented that the civil service Accord Committee overrode preference of their Committee for less expensive BMP covers.

Researchers

The researchers were asked if they believed the activities carried out were appropriate to achieve their program or project objectives. They were unanimous in stating they were appropriate. Reasons for this belief, given by the managers, were that the technology transfer of research results had occurred and they followed the terms of reference as outlined. The researchers said that they didn't get "off line", they were "on target" and the results were excellent.

Conservation Clubs

The project staff were unanimous that the activities carried out were appropriate to achieving the program objectives. A wide range of reasons were given for their opinions. Eleven said they had followed the terms of reference or work plan as outlined, thus, if the work plan was appropriate, the activities would have achieved the program objective. A substantial number of activities were described. One project leader added an interesting note by saying that the farmers believed the activities carried out were appropriate, but that the researchers was not totally satisfied with the information collected.

Environmental Farm Plan

All of the program managers and program reps believed and all, but one, of the technical advisors believed the activities carried out were appropriate to achieve the program objectives. The comment made by the program reps to justify this decision included: got farmers thinking and discussing (2); made people aware of environmental damages; and the workshop approach is good. The technical advisors said the workshop process is a good way of achieving objectives (2), reviewing their own farm situation committed them to doing a credible job and the program created awareness.

WWW

The program managers/project staff were unanimous in believing the activities carried out were appropriate to achieve the program objectives. Five said the program followed the terms of reference. One said the actual program was different than the one originally proposed but apparently it was still appropriate. Others described their program or made comments as to its effects rather than addressing the question.

IT/BMPs

All the respondents believed the activities carried out were appropriate. They supported their conclusions by stating that: they had the goals set out; they hired a contractor and then the team reviewed the material for consistency of the recommendations; the multi-disciplinary, multi-agency approach ensured accurate, high quality BMPs; needs assessment research was undertaken; and everyone focussed on producing a manual.

SIB

The respondents believed the activities carried out were appropriate to achieve the program objectives. The newsletter, *Innovations*, was the flagship of the program, the goal was to build a network of farmers and extension people by means of the newsletter, workshops and the web site.

Other Data

One component of the Research program, relating to Manure Management, commissioned an unsolicited proposal for a review of the five studies conducted. As a result of one researcher's objections to the content of the report, it has not yet been released. The only other program to have been externally evaluated was the pilot project of the Environmental Farm Plan. That evaluation was primarily formative in nature and was designed to assist in modifying various aspects of the training workshops, the workbook and the peer review process. On the basis of the recommendations, a number of modest changes were made in the program. The EFP has consistently overestimated the number of program participants and the uptake of grants. Applications went up when grants were increased to \$1,500.

The Rural Conservation Clubs program experienced problems where a few clubs did not complete their full program. For example, the property being used for the screening of bestialities approved for land utilization in corn in Dundas County was sold, thus abruptly ending the project. The South Lambton Conservation Tillage Club folded because it could not attract enough members.

In addition, we noted that a grant of \$3,500 to the Ontario Farm Women's Network to support a conference was listed as a Conservation Club project in some, but not all, project activity lists. The WWW program experienced difficulties in getting complete reports on the activities on a few projects.

Summary

Based upon the evidence available, primarily self-reports, the programs were generally carried out as planned. A number of program delivery problems were identified. Some were relatively significant, like the SIB, but most of the rest did not jeopardize the overall success of the programs. In future, any programs which consist of groups of farmers or landowners such as the Conservation Clubs and WWW programs should ensure the project leaders are qualified and understand their reporting obligations.

2.3 Was the administrative system flexible enough to respond to required needs?

Since the question was asked in relation to each of the seven specific programs, the Committee Members were not asked this question.

Researchers

Twelve of the 14 researchers said the administrative system was flexible enough. Examples cited include: adjustments were made in the early stages or changes were allowed (4); we added a Ground Positioning System to the project; it allowed the hiring of staff; DSS did an excellent job and showed a real interest by going on tours; modified to stakeholders responses; much better than SWEEP; and several general positive comments. Two respondents expressed the opinion that it could have been even more flexible.

Conservation Clubs

All but one project staff person believed the administrative system was flexible enough to allow adjustments so the program responded to participants' needs. Half (9) of the respondents said that adjustments were made to their work plans or field studies. Four said budget adjustments were allowed and two said they had a good response from the administration.

Environmental Farm Plan

All of the managers, all of the technical advisors and all, but one, of the local county committee members believed the administrative system was flexible enough to allow adjustments so that the program could respond to participants' need. It was pointed out that a home study program was developed for those who did not want to commit to workshops but it was not as effective.

Six of the program representatives and four of the technical advisors pointed out that the program was modified as necessary. Changes in emphasis were in the content of the workshops by tailoring them to the type of farm operations of the participants and by adjusting the timing of the workshops.

WWW

Eight of the 10 project staff believed the administrative system was flexible enough to allow adjustments so the program could respond to participants' needs. One of the two who disagreed said they had a problem in shifting resources from a low participation area to one where uptake may have been higher. The other said there was too little flexibility in planning and that monthly budget projections were inflexible.

Those who believed that the program could adjust to participants' needs made the following comments: able to make changes along the way (2); no problem in responding to landowners' suggestions where reasonable (2); made written requests to Canadian Wildlife Service to make some changes; and some limitations existed, ie. could not carry over dollars to the next year.

TT/BMPs

The respondents all agreed that the administrative system was flexible enough to allow necessary adjustments. Examples of flexibility were the ability of BMPs to select authors from either outside or within the research establishment and to determine subjects. The contract with the OFA to administer the project described by one respondent as flexible. One pointed out that clients needs had been assessed and their program addressed them.

SIB

The administrative system was believed to be flexible enough to allow adjustments to the program. The respondents answered this question in relation to the AAFC and Green Plan administration, not the SIB administration. They said the change in mandate of AAFC to marketing left the SIB with inadequate guidance, supervision and administration. The work plan was flexible enough to allow a change in direction and the adoption of different projects.

Summary

A majority of respondents interviewed from each program believed there was adequate flexibility in responding to project needs and making adjustments.

2.4 What percentage of program objectives are expected to be achieved by March 31, 1997?

The responses to this question were frequently a range of percentages rather than a specific percentage because the respondents frequently did not have adequate information or were reluctant to be precise.

Committee Members

The Committee members were asked about Green Plan while all the other were asked about their own plan. The results for the Committee members and all others not asked supplementary questions are summarized in Table 5.

Environmental Farm Plan

The expected achievement levels of the three program managers, as shown in Table 5, were: 50%; 75% and 90%. The program reps were asked if their county had a goal for a specific number of farms to be peer reviewed and approved by March 31, 1997. Five said they did and five did not. When asked what their goals were, only three gave a number and a fourth said they set their goal on an annual basis but had not yet done so. The goals given were 200, 300 and 350. Five volunteered that they would have 25%, 33%, 75%, 90% and 100% of their farm plans peer reviewed and approved by March 31, 1997.

Table 5. Percentage of Program Objectives Expected to be Achieved by March 31, 1997

	%									DK/ NR	Total
	Less 20	21- 40	41- 50	51- 60	61- 70	71- 80	81- 90	91- 99	100		
Committee	2		2		2	3	3			2	14
Research Managers Researchers							1	5	3 5	1	5 10
Conservation Club Staff A Staff B Participants					2	1 2 4	1 4	1	2 6 8	6	5 14 18
EFP - Pgm. Man. Pgm Reps	- -	- 2	1 -	- -	- -	1 1	1 1	- -	- 1	- 7	3 12
WWW	-	-	-	-	1	1	5	3	-	-	10
TT/BMPs	-	-	-	-	-	-	1	2	1	2	6
SIB	-	-	-	-	-	1	1	-	-	-	2
Total	2	2	3	-	5	14	18	11	26	18	97

Summary

A relatively wide range of opinions were found as to the percentage of the program objectives expected to be achieved by the end of the program. About one-fifth of the respondents did not know or would not make an estimate. Most believed 71% or more of the objectives would be achieved. The most optimistic were the researchers, all of whom believed 91% or more

would be achieved. The members of the three Committees were less optimistic than the others as half of those who made an estimate said 70% or less of the objectives would be achieved.

2.5 Has involvement with Green Plan activities introduced environmental consideration in normal business and program decision making?

Farmer participants were asked this question in terms of their own business and staff and others in terms of farmer program participants. The Committee members were not asked this question.

Researchers

The five who completed the Project Manager and Project Staff questionnaire were asked if the farmers they collaborated with now gave more consideration to environmental factors in farm planning. Three believed they did and commented that they worked with and saw leading-edge farmers, increased farmer awareness had occurred and more information flow was now available. Two did not express an opinion.

Conservation Clubs

The project leaders were asked if they believed the farmers who participated in their program now give greater consideration to environmental factors when planning their farm operations. Fifteen said they did and four said they did not. The reasons given by those who believe they do, suggested that some may have interpreted "now" as meaning "at this time" rather than "after participating in the program". As a result, people made comments as follows: moving in that direction all the time; more aware of environmental impacts; more aware of non-chemical alternatives available; farmers' attitudes have changes; they were already adopting and practicing; and had a stewardship ethic already.

Others who appear to impute an impact from the program gave reasons such as: greater awareness (2); more involved in environmental considerations; and some give public presentations and adopt practices on farm (2). Two respondents did not believe the participants give greater consideration because: other environmental awareness projects are

going on; Green Plan is a fine tuning of other views; have done EFPs; and you can't improve on that (2).

The farmer participants were asked if they consider soil conservation and water quality issues when developing cropping and tillage plans for a new crop year. Seventeen said they did and one said he did not. When asked to check each issue they consider, the results were as shown in Table 6.

Table 6. Soil and Water Conservation Issues Considered

Issue	Number Considering
Potential erosion	15
The costs involved	14
Soil compaction	14
Crop yields	13
Impact on water quality	12
Machinery and equipment	11
The probable returns	11
Weed control	10
Timeliness of field operations	9
Manure application	7
Labour	6
Impact on wildlife	6
Management	4

Environmental Farm Plan

The program manager, technical advisors and program representatives were unanimous in their belief that those who participated in the EFP now take environmental factors into consideration when planning their farm operations. Among the 65 committee members, 95% gave an unequivocal "yes", farmers take environmental factors into consideration and the remaining 5% replied that "some" farmers do.

The reasons given for believing the above to be true were as follows:

- Managers
- even those who have not taken actions consider environmental factors;
 - farmers are caring, partially due to EFPs;
 - farmer evaluation sheets support new activities;

Program Reps

- farmers now realize there are better ways to do things (9);

- yes, but lack of hard evidence;
- pesticide handling now done very carefully;
- yes, now replacing trees and shrubs;

Technical Advisors

- yes, based on comments heard (4)
- farmers relate well to issues;
- they buy in from doing own assessment;

Committee Members

- farmers are more knowledgeable (20);
- farmers have greater awareness (20);
- comments heard (9).

WWW

Nine of the 10 staff respondents believe that the farmers now give greater consideration to environmental factors when planning their farm operations. One said some do and some don't. The reasons for believing this occurred included: they want to make more changes and when using EFPs (3); they appear to (2); many are now environmentally conscious (2); and neighbours also pick up on what is being done. Further comments about the program included: good program (2); need money for wildlife research; allowed Ducks Unlimited to get into extension work; may not directly affect farmers; and there is a need for budget flexibility and money for monitoring.

The program participants were asked if they considered soil conservation, water quality and fish and wildlife issues when they develop their cropping and tillage plans for a new crop year. Nineteen out of 34 said they did. The most frequent issues considered were: potential erosion (18); impact on water quality (18); the costs involved (15); weed control (12); crop yields (12); soil compaction (11); the probable returns (11); and impact on wildlife (10).

SIB

Both staff respondents believe that the farmers who participated now give greater consideration to environmental factors. They believe this because: the farmers involved are

among the innovative leaders in their community; they see the economic benefits and leading farmers share what they are doing and then others copy and encourage them.

Summary

The responses of the program participants provide very strong evidence that the farmers interviewed and those farmers observed by the program planning and delivery staff consider environmental issues when planning their farm activities. The consistently high level of concern illustrated across the various programs, especially by the farmer respondents, indicates this objective is being achieved.

2.6 Did participation in Green Plan encourage farmers to adopt sustainable agricultural or environmental practices?

Researchers

Most of the researchers did not deal directly with farmers when conducting their projects, thus farmers were not exposed to new practices as part of their program. Three of the five who had contact said the farmers were watching but two said the farmers were already adopting practices. The responses appear relatively ambivalent in that they suspect, but could not confirm the adoption of new practices.

Conservation Clubs

The project staff were asked if the participation by farmers, in their program, encouraged the adoption of sustainable agricultural or environmental practices. Sixteen of the 19 project staff said participation encouraged adoption, two said it did not and one did not know. Ten persons said that the farmers who participated in their project, tried a new practice and on the basis of this experience, adopted the practice. Four mentioned that participation resulted in farmers purchasing new equipment.

The farmers were asked if the information, one-on-one advice and money provided made a difference in their decision to adopt the practice demonstrated on their farm or property. Fourteen farmers said it did and one that it did not.

Environmental Farm Plan

The managers, program reps and technical advisors were unanimous in stating that participation in EFP encouraged the adoption by farmers of sustainable agricultural or environmental practices. Among the local county committee members, 86% said yes and 14% don't know.

WWW

Seven staff believed participation in the program encouraged the adoption of sustainable agricultural practices. One disagreed and four didn't know. The reasons given for believing this were: incentives worked well to encourage adoption; seeing is believing; farmers looked at operation from a different perspective; a lot of participants want to do more; and through personal participation, they saw the benefits (2). Among the 34 participants, 26 said the information, one-on-one advice and money provided by WWW made a difference in their decision to adopt the practices demonstrated on their property. Four said it did not.

SIB

One person believed the participation by farmers encouraged adoption by those who are leaders. The other felt that it was not a negative influence but they were working with the leaders, not the later adopters.

Summary

Participation in Green Plan programs had a major influence on the adoption of environmentally sustainable agricultural practices among participants. Among the Conservation Clubs and WWW participants, approximately 90% said the program influenced their adoption of new practices. The reports of over 80% of the Conservation Clubs staff and EFP committee members confirmed that their programs had influenced farmer adoption.

3.0 Program Design and Delivery

3.1A How effective was the delivery approach for your program?

A number of issues relating to program delivery and design are very similar to those considered under an alternative delivery system, Section 5.2. Since this question was program specific, it was not asked of the Committee respondents.

Researchers

The research managers and research contractors scored the delivery approach in an identical fashion with the same number saying the delivery was very and quite successful. In both cases, 20% of the respondents were neutral or did not reply. The ratings, along with those from the other programs, may be found in Table 7.

The managers believed the delivery approach was effective because: a lot of preplanning was done; the contractors provided the raw data they agreed to; the annual workshops helped keep the work focussed; and there was excellent rapport with the other team members. The researchers believed it was effective because changes were made rapidly, the ability to deal one-on-one with the manager and more levels of administration would have been a waste of money.

Conservation Clubs

The Conservation Club B project leaders rated the success levels of their programs as shown in Table 7. The reasons given for their ratings by the ten Club B respondents were: the people, ie. administration and managers were helpful or good to work with (4); the project had a good work plan, schedule, data base, etc. (4); mass media coverage was good (2); and one who mentioned the lack of economic data, insufficient meetings, etc.

Environmental Farm Plan

The program managers, program reps and OMAFRA technical advisors rated the program delivery system for the EFP quite highly as may be seen in Table 7. The program reps and

technical advisors commented that the fact that the program was run by a farm organization impressed farmers, encouraged participation and was perceived positively.

Table 7. How Effective Was the Delivery Approach For Your Program

	Successful				Unsuccessful	
	Very	Quite	Slightly	Neutral/N R	Slightly	Score*
	#					
Research Managers	2	2	---	1	---	2.5
Research Researchers	4	4	---	2	---	2.5
Conservation Clubs	4	6	---	---	---	2.4
Staff B						
EFP Managers	2	---	1	---	---	2.3
Program Reps	12	---	---	---	---	3.0
Tech Advisors	8	---	1	---	---	2.8
WWW	2	2	3	---	2	1.2
TT/BMPs	1	1	---	---	---	2.5
SIB	1	---	1	---	---	2.0

* The responses were rated: very successful +3, quite successful +2, slightly successful +1, neutral 0, slightly unsuccessful -1 and very unsuccessful -3.

It was noted that the infrastructure was already in place from the Land Stewardship and Permanent Cover programs. They also commented that the program was less bureaucratic and less expensive but the peer review was a hold-up sometimes. The program managers were positive about the workshops. One commented that the management structure failed to look at alternative ways for people to participate.

WWW

Six of the staff said the delivery approach was very successful and three that it was quite successful. The reasons given to support this high level of satisfaction include: all the objectives were achieved (2); had good results; it was looked at as a model project in which the participants were satisfied; had a good field person; high degree of acceptance by landowners and community; and accomplished goals.

Among the difficulties experienced were: budgeting and no carry over (March 31) of money; other partners could have promoted more; finding appropriate sites and cooperators reporting process was awkward; tried to do too much; shortage of summer students; and lack of monitoring.

TT/BMPs

The two technology transfer staff who answered this question believed the delivery approach was very or quite successful. They pointed out that flexibility in all areas allowed them to get the job done, the Decima research indicated that farmers are very positive and the Committee was satisfied because all targets had been met even though part of the program did not start on time.

SIB

One interviewee believed it was very successful because they did what was planned, got good feedback from farmers and there was a high use of the electronic data base. The other said it was slightly successful because of a lack of communication and support between the participating parties. Many difficulties in delivering their program were identified by the staff. These included: underfunding; lack of agricultural expertise of staff; limitations imposed by university administration (2); lack of continuity of staff; lack of management training and staff evaluation procedures; and a lack of cooperation with Green Plan partners.

3.1B What if any modifications to the program should be made if it is repeated in the future?

Committee Members

The majority of committee members volunteered one or more suggestions for modifications to the program. Administrative suggestions included: streamlining the committee structure; reduce number of committees; better coordination between the federal and provincial departments; change the organizational structure; and better use of resources. Suggestions for focus or direction included: more emphasis on environmental impacts of agricultural activities; deal with key farmer issues; promote capacity building; need more monitoring/measuring indicators; allow more groups, ie. private/industry to deliver programs; and greater farm organization involvement.

Researchers

The researchers were more positive and more specific than the others as to modifications believed appropriate. Two of the managers said none, one said use what we have learned and another said, "build on progress already made". Other suggestions were to allow greater integration across programs and to provide more money for wrap up consultation and technology transfer activities. The researchers were concerned about financing and quality of work. They wanted: more money, better funding for on-farm research (2); a long term commitment to data collection (2); and greater cooperation between the feds and the contractor. They also suggested: keeping track of the quality of science delivered by contractors; that universities provide the best work and value; and that internal technical support be available within their own agency. The other pertinent suggestion was to have a data manager.

Conservation Clubs

The Club A staff suggested that conservation clubs should not be for research, less administration is needed, no changes were needed since adjustments were made as they went along and more direction including more plot visits. There was a feeling that too much accounting, auditing and overly frequent reporting were required.

The 14 Club B staff made 18 suggestions for improving the program. These were: the general areas of funding and budgeting methods (5); the simplification of the paperwork and administration (4); more detailed objectives (2); a better information base and better communication (2); and the researcher should be an advisor, not the program manager. A significant number of individuals who mentioned the financial and administrative aspects of the program.

Among the 18 program participants, one simply said it is a good program and well organized and one that no modifications are needed. The others had a wide range of opinions including: less paperwork; partner each project with a researcher; get more farmers involved; and do not have the Ministry of Environment involved with agricultural projects because of their lack of knowledge.

The Club B participants were also asked how participation by club members could be improved in terms of number of persons and completion of program activities. In regard to the number of persons in a club, one said that "small numbers work best", others said: at least 10; 15-20 is about the right size; 6 or more farmers is sufficient; and two noted it is hard to get more people involved. The suggestions for improving the completion of program activities were quite general noting the club was OK, most were active and involved and that single objectives are easier to maintain in small groups.

Environmental Farm Plan

The managers suggested that: fewer program reps and peer reviewers were needed; there should be more concern re benefits to farmers; they wanted more control, better trained, more experienced people; and a revision of the work book. The program reps had a wide range of suggestions: more money for and better, earlier promotion (2); make an allowance for consultants' fees, let program rep interact with the farm personally (2); allow smaller groups, enhance the incentive program (2); more French language skills; and involve non-farm rural residents.

One of the OMAFRA technical advisors wanted a one day workshop while another wanted the second day to be mandatory. Another suggested combining secondary groups if they are

small. Other suggestions were having two people facilitate the workshops, hold them in the evenings, eliminate the long introduction and less emphasis on completing the workbook.

The County Committee Members had some very practical suggestions for modifications. Of the 52 making suggestions, 29% suggested keeping the workbook format as simple as possible; 19% wanted the grants increased and 11% more educational material. Other suggestions included: more support from farm organizations and groups; improve the worksheets; more emphasis on the work plans at workshops; and more money for contacting farmers. One in seven had no comments.

WWW

Suggestions made by the staff related mainly to administration and financing. There was a belief that the amount of reporting was excessive, there is a need to carry money over the March 31 deadline, and a need for more flexibility on administration. One person wanted a little more financial involvement by landowners, the ability to change target areas and said not to fund more than one project by each group.

The participants suggested modifying the program in the future by enlarging its scope, maintaining the level of financial assistance, allow local WWW Clubs to interpret which projects should be financed and use better quality material or larger trees in the tree planting projects.

IT/BMPs

The respondents suggested the following modifications: provide longer financial planning to allow for market research; start to identify needs at the beginning so can use funds and fit into the program's "big picture"; give funding to interested people; have task oriented teams; and hire a writer/editor instead of using a consultant. One stated that problems of March 31 deadlines may drive a program in a way which does not support the objectives. They said they had experienced difficulties with the time frame because they were so late starting the first fiscal year, the budget was lapsed. Other comments included: there is a need to continue technology transfer after the end of Green Plan because technology transfer comes after the projects are finished; privatization and private contracts for writing were not successful; writers

were frustrated by an editor who made changes without consulting the writers; and it was difficult to determine the info needs of farmers with a high degree of reliability.

SIB

If the program were to be repeated, the staff propose the following: a bottom-up rather than a top-down planning process; let the users decide what they need and how prefer to get it; get university staff involved because they do a better job of managing these types of projects when staff involved; and better cooperation with partners.

3.1C Are there better alternatives to any of the programs?

Committee Members

The committee members were asked if there were better alternatives to any of the programs and, if so, what alternatives they would suggest. In many cases, they made suggestions for changes to the existing programs rather than for different programs. Four members suggested an alternative to the Stewardship Information Bureau, three to BMPs and Conservation Clubs and one each to Technology Transfer, WWW, Environmental Farm Plan and Research programs.

The suggestions made by the Committee Members were summarized as follows:

Program	Suggestions
Research	- Realign the existing programs and get more people involved
CC	- Greater control of finances - Reduce
EFP	- Build on base program
WWW	- Use a watershed rather than on-farm, site specific approach - Build on base programs

- Reduce

Technology - More agribusiness involvement

Transfer - Still a problem

- BMP
- Look at cost recovery
 - Increase subject matter
 - Use more channels of communication, ie. videos instead of books
 - More self-sufficient
 - Now directed at elite farmers, try to get at middle level farmers

- SIB
- Reduce
 - More linkage with target groups
 - Is there another structure?
 - Get at middle farmers, not elite

Researchers

The five researchers who completed the Program Manager and Project Staff questionnaire were unanimous in stating there aren't better alternatives to their program. One commented that the unique round table management of Accord Committees had solved federal and provincial problems and created a better consensus than ever before. Another stated it was as open and consultative as possible. One also said there was good cooperation between the private and public sectors.

Conservation Clubs

Of the Club A respondents, only one believed there was a better alternative and four believed no better alternative existed. The alternative suggested, which was more of an extension of existing activities than an alternative, was to broaden clubs to include research.

The Club B project managers voted no 11, yes 2 and DK 1, when asked if there were better alternatives to the program. They made several suggestions for improvements. Those who said there were better alternatives suggested forming a group, designing a project and then carrying out the project under funding guidelines. One other wanted an accredited agency to be involved so that information will be valid or usable elsewhere. Those who said there

weren't better alternatives requested openmindedness between field people, administrators and head office. Another said farmers should be involved in research and researchers should be involved in farmer projects. Another pointed out that farmer involvement makes research more believable and they look at the economies or the bottom line. Another suggestion was to lease rather than purchase equipment.

Among participants, only one believed there are better alternatives to this project while 9 said there were not and the remaining 9 did not reply. The only suggestion made was to have programs run by OMAFRA or a private firm. A couple commented that the projects provide good results which are trusted by the agricultural community and it is already set up properly.

Environmental Farm Plan

One of the three managers' believed there was a better, but not identified, alternative if environmental enhancement was the only objective, but not if one looks at the broader picture. The other two believed no better alternative existed.

All nine of the OMAFRA technical advisors and all, but two, of the 12 program reps did not believe a better alternative existed. One dissenter believed the land stewardship model was good and another suggested one to five farmers meeting around the kitchen table. Three-quarters of the committee members did not think there was a better alternative. Half of the others said yes and the remainder were unsure or didn't know. The suggested improvements included: make the program mandatory (2); increase the money; audit of the farm site; do a follow-up assessment in one or two years; and pay farmers to complete the work book.

WWW

Only two of the 10 project managers believed there are better alternatives to this program. One suggested more autonomy and commented that the government underestimated the administration capacity of partners. The other liked more structured projects. Among those who did not believe there are better alternatives, a few made the following comments: involve farmers who are more motivated; Soil and Crop (OSCIA) responded to local needs faster than CWS who were very slow to respond; fewer multi-level deliveries; and conceptually, a good program but may have had wrong group of participants in this project.

Five of the participants believed there are better alternatives to this project but 22 did not. Among the suggestions for improvements were: allow farms to more easily obtain kill permits (geese); more financial incentives for managing forestry and wildlife on farms; explain to farmers how this wildlife management is better for them as it has been done in New Zealand; and the trees are so small, the survival rate is low, therefore a waste of time, effort and money.

IT/BMPs

Two respondents said there are better ways to provide this information or prepare BMPs. One was ambivalent as to whether an electronic or print system was best. The other believed there may be people in OMAFRA who could do the work and the people on the Advisory Committee should be allowed to do it (rather than hiring consultants).

While the others did not believe there was a better alternative, they did make several comments. They suggested: there was a need to have all the parties at the table; a budget for each program was probably best but not as efficient when related to the work plan; and it was good the way the task team functioned collectively and the writers wrote what the team wanted.

SIB

Both agreed that there are better alternatives but did not identify them. One pointed out that technology has made the bureau (computer bulletin board) obsolete because everyone can have a web page. The other commented that sustainable farming information is now available so must make changes.

Among the extension personnel, nine believed there is a better alternative, four did not, one said yes and no, three did not know and seven did not reply. The alternatives suggested included: internet could partially fill need; a central agency to work with extension and groups; people want to hear from someone with hands on experience; possibly an inter-agency association; local OSCIA advisors are closer to local situation; networking between the University of Guelph and OMAFRA (2).

Those who do not believe there is a better alternative pointed out that: no one has the time or dollars to devote to SIB like SIB does now; opportunities through internet; SIB has skills but no recognition; and it would be useful if data from various sources were more aggressively coordinated as to what goes in the data bank.

3.1D Could your program have been delivered at a lower cost administratively?

Committee Members

These people were asked the question in terms of the Green Plan while all others were asked about their own programs.

One Accord committee respondent stated that there is always room for some saving but they were not familiar with the specific programs costs. Three members of the Advisory, but none of the Management committee members believed that administrative costs could have been reduced, see Table 8. When asked for specific examples, the answers were as follows: fewer committees; eliminate the committees but it may not be more effective; too many people managing; and fewer administrative steps.

**Table 8. Could the Program Have Been Delivered
At a Lower Cost**

Respondents	Yes	No	Unsure or No Reply	Total
Committees	5	6	3	14
Researchers	2	2	1	5
Conservation Club A	1	4	--	5
B	3	11	--	14
EFP Program Managers	---	---	---	---
OMAFRA Tech Adv.	5	4	---	9
Program Reps	1	11	---	12
Committee Members	13	44	8	65
WWW	4	5	4	10
TT/BMPs	1	4	1	6
SIB	---	2	---	2

Only the Committee members were asked to identify which program could have been delivered at a lower cost because they were perceived not to have responsibility for a program. The others were asked if their programs could have been delivered at a lower cost. We did not believe it appropriate to ask program personnel to comment on other programs given the fact that most of them would have very limited information.

Among the Committee members, the programs believed to be capable of being delivered at a lower cost were and the reasons given are as shown:

Program	Comments
Research	- Lots of money, may have been done cheaper
EFP	- Matching funds could have come earlier in the program - Tried to break the program down into too many small programs
BMP	- Too glossy - Impact minimal compared to dollars spent

Researchers

Among the researchers, two believed their program could have been completed at a lower cost and two did not. One of the cost cutters said it would have been cheaper if done through the university. Others pointed out that they did their project at the lowest possible cost, they made do with available funds, they ran a lean and mean operation and they were not aware of any potential cost savings. A few qualified their position by noting that they achieved their objectives (2) or they may not have achieved objectives if they had cut corners.

Conservation Clubs

As may be seen in Table 7, only four of the Conservation Club project leaders believed the program could have been delivered at a lower cost. The means of saving identified included: if the administration were streamlined, it could have saved that cost; equipment was the biggest cost (2); and approximately \$2,000 surplus was spent on outside speakers at meetings. The others suggested the program had been operated at relatively low cost because of the large amount of volunteer work.

Environmental Farm Plan

Two staff thought the program could possibly be delivered at a lower cost and one said "yes, but it would not have been as effective". The other two believed something would have had to be given up, ie. benchmark data or if the farmers pay for having the plan completed on a fee-for-service basis, that it would have been cheaper than workshops.

The majority, five, of the OMAFRA technical advisors but only one of the program reps believed the costs could have been reduced. Two OMAFRA technical persons suggested smaller groups, thus lowering the workshop cost on an average basis. Another suggestion was to have farm organizations or agribusiness sponsor the program and using a program representative who is paid by the hour instead of a salaried OMAFRA person. The program reps emphasized the need for personal contact, that peer review is important, no need to collect the aggregate data, let the county coordinator (program rep) do the review of the action plans.

WWW

Four of the staff believed the program could have been delivered at a lower cost, five did not and one didn't know. Those who thought costs could have been lower explained their opinions as follows: perhaps less bureaucracy; provide 100% incentives at farm gate; less time on admin and more at field level; and high admin costs relative to low uptake resulted in poor economy of scale.

On the other side of the issue were participants who stated: admin costs were low and costs were approved for the time involved; bare bones budget; never used full amount allocated to administration; and costs were appropriate, lots of time was put into the project.

TT/BMPs

Only one of the interviewees, a BMP manager, believed that the program could have been delivered at a lower cost. He said that the BMPs could have used corporate sponsorships and sales of publications to specific audiences. The costs of "glossy" vs "less glossy" BMP publications and commitment to a quality image, etc. were mentioned by several people. This was a continuation of an argument which developed between the Advisory Committee and others at an earlier date.

SIB

The respondents agreed the program could not have been delivered at a lower cost. One said the physical plant costs were high and both believed the project was underfunded with the result that staff were stretched to do what was done.

3.1E Were the grants to participants too high or too accessible?

Researchers

Only the 10 non-management researchers were asked these questions, of whom only four said they provided grants to farmers. Of these respondents, one said grants were too low and two about right. Only one expressed an opinion on ease of acquisition and they believed payments were too easy to acquire.

Conservation Clubs

The Type A Club managers were asked if the level of funding for their projects was too high, about right or too low. Four out of five said about right and one too low. When asked specifically about payments to participants, only one had such a project. He said the grants were too low but also too easy to acquire.

The four Type B managers who made grants to participants were unanimous that they were just right in terms of ease of acquisition. Only one made a judgement as to level and that person said it was a good amount. The following number of participants reported the proportion of project costs on their farms paid from Green Plan were: zero (4); 10% (1); 25% (3); 50% (7); 75% (1); and no reply/DK (2). Fourteen believed the level of funding was about right and two that it was too low.

Environmental Farm Plan

The level of grants to participants were seen as just right by 10 and too low by two of the program reps. The majority, 78% of the county committee members (peer reviewers) who answered, said the grants were too low, 20% about right and 2% too high. In terms of ease of acquisition, of the 10 program reps who answered, 60% believed the system was about right, two believed it was too easy and two too difficult. Very few county committee members expressed an opinion.

WWW

Six of the staff believed that the level of grants to participants were "about right" and one "too high". Four believed the grants were too easy to acquire and three said it was alright. Comments included: all groups had stakeholder committees to help flow the dollars; more people applied for projects in excess of funds available; given the difficulty of the issues, grants were just a little too high and too easy to acquire.

The participants were asked to indicate the level of costs paid from Green Plan funds. Eleven received 100%, four received 80%, four 75%, one 70%, one 66%, three 60% and one each 40%, 30% and 10%. Twenty-two described the level of funding as "about right" and four as "too low". Two said the funding provided an incentive to try the project, two said maybe the

participants should contribute more than land and time, two said funding was appreciated and one that the level was OK.

3.1F Did the program result in new community participation and development activities

Conservation Clubs

Only one Type A project person believed the program resulted in new community participation and development activity. They said it developed a support network for people to contact for other things. Two said it did not result in greater participation and three did not know.

Among Type B staff, eight said it did, five that it did not and one did not know if new activities developed. Among the activities reported were: created a lot of cooperation among farmers, day seminars; the project was extended at the request of other farmers; the projects and tours in communities opened up ideas to residents; created an interest for constructed wetlands for campgrounds, other farmers and the City of Windsor; machinery dealers were interested in results of tests; and farmers were exposed to the EFP by the ground water survey.

Six of the participants said their Conservation Club project resulted in other community participation or development activities. Five said it did not and six did not know. Activities reported include: people were encouraged to exchange results with others; the group is now working on a new project, Narrow Row Corn; the Waterloo Region is becoming more inclined to adopt biosolids; and the chemical and equipment manufacturers are becoming involved.

Environmental Farm Plan

All three of the program managers believed that the program resulted in community participation in other programs by the farmer participants. Examples given included the creation of the water quality working group, the Elora homestead assessment project, emergency tubes developed in cooperation with local fire departments; the new fuel storage regulations, the Minnesota demonstration project, lead to discussions with Ministry of

Environment and Energy regarding maintaining confidentiality and regular meetings among farm groups and the deputy Ministers of several provincial ministries.

Among the local county committee members, 21% believed that involvement in the EFP program resulted in other new community participation and development activities. Thirty-one percent said it did not and 48% didn't know. Of the 17 who gave examples, 35% mentioned that farmers supported other groups or participated in other programs, 29% the adoption of new practices, 18% cited greater awareness or changes in attitudes and the remainder were not aware of any increase in community activities.

WWW

Four of the staff believed involvement in their program resulted in other new community participation and development activities, one did not and five didn't know. Two said a variety of community projects resulted, one noted that some farmers started doing EFPs and another said that volunteers from different associations and centres/school groups became involved.

Twenty-eight participants said there was interest in their projects from individuals who were not members of their WWW project. Three reported no such interest. Twenty-six participants said these individuals asked them questions and 16 said the interested individuals visited their farm as part of a tour and 18 said they visited on their own. Fifteen farmers were aware of other landowners adopting practices tried on their farm or property.

Other community participation and development activities resulting from the project were reported by 10 participants. Examples cited included: community tree planting (3); landowners on the river participated; and a stewardship council. Other reported expressions of interest (2), volunteer learning and the adoption of practices.

Summary

The interviewees, at all levels from management to staff to participants, generally believed that their program delivery approach and the actual on-site delivery were quite effective. In most

cases, a few individuals dissented. One of the most frequent complaints was that there was either too much administration or the administrative costs were too high. On the other hand, field personnel and program participants tend to look at almost any reporting activities and administrative costs as excessive. A balance needs to be maintained between accountability and achieving program objectives.

There was general acceptance of the level of grants provided with, as usual, a few wanting more dollars. The EFP and the two group oriented programs, Conservation Clubs and WWW, resulted in additional community activities. They illustrate the benefits of demonstration projects which are visible to other members of the community.

3.2 Did the priority settings and fund allocation process lead to optimum environmental benefits within the given budget of \$25.6 million?

Committee Members

Only the members of the three Committees were asked this question because the managers of the various programs were not assumed to have an adequate overview of all the programs.

Seven said the allocation process lead to optimal benefits, three disagreed, two were unsure and two didn't know. Those who said the process created optimal benefits emphasized the committee structure and the bringing together of stakeholders (2). Others who approved of the process mentioned the BMPs (2) and the Environmental Farm Plan.

Caution was expressed by two respondents who were concerned about the lack of environmental monitoring. Three, who did not approve of the budget allocation, mentioned the lack of wildlife research, too much money to BMPs and not enough to demonstrations and one just didn't like the targeting. The third person commented that there was too much red tape, too many participants and did not like the omnibus nature of the program.

Other Data

The Green Plan priorities were set on the basis of the input of a substantial number of individuals who attended the Green Plan Agriculture Stakeholder Forum at Kempenfelt. This

was a major departure from traditional government policy planning which has been top down and driven by a mixture of political and expert perceived needs.

Summary

While we believe the priority setting and fund allocation are reasonable, there is no empirical means of determining, at a reasonable cost, the optimum environmental benefits. In retrospect, one can always argue that some programs should have received more or less funding but such discussions are based more upon opinion than demonstrable facts. There are no established criteria for comparing the relative environmental benefits of research versus technology transfer activities.

The failure of the EFP program to meet their participation objectives and under spending of grants represents the single largest error in allocation. These monies were later allocated to a number of ground water related projects. The SIB was almost terminated early in the program but a decision was made to continue the Bureau. If it had been closed, the impact on either the overall program achievements or budget would have been relatively limited.

We are of the opinion that the evaluation function was neither well planned nor adequately funded to be of optimum use to the planning of future programs. The ideal program evaluation begins as soon as possible after the program is initiated. This allows the evaluator to observe the program from beginning to completion. The evaluation should include baseline, formative, midterm and final measures. The whole evaluation should be completed by the same evaluation team.

The Green Plan evaluation activities were: late in starting; disjointed by the use of three consulting teams and changes in the evaluation design; underfunded; and, in the case of the baseline study, extremely rushed. The result is three evaluation studies which lack continuity because they all address very different issues and do not facilitate measurement of the environmental benefits of the Green Plan or the seven programs.

3.3 Did farmers have access to sufficient information?

3.3A Did the information acquired provide farmers with sufficient technical information to determine the feasibility of adopting sustainable agricultural or environmental practices?

Researchers

This question was not well answered by the researchers mainly because, as was stated, the researchers were completing research and monitoring and not demonstration projects. Two noted they spent a lot of time talking to the farmers. Four researchers believed the farmers acquired sufficient technical information, one did not, four didn't know and the others did not answer because farmers were not involved in their program.

Conservation Clubs

All, but one, of the 19 program and project staff believed that their program provided farmers with sufficient technical information. The one person who did not know had a research project for which the final report was not complete. Among the project participants, 14 said it did, one it did not and three did not know.

Environmental Farm Plan

The managers were ambivalent about the sufficiency of technical information. One said it was sufficient because staff and BMPs were available. One said it was sufficient for some individuals and practices but others would have benefitted from a personal interview. The third individual disagreed saying the peer review could have been wider and should have told farmers to get more info but never did. He also stated there was a lack of understanding among AAFC, OMAFRA and OSCIA as to who would do what.

Seven of the nine OMAFRA staff and eight of the 12 program representatives believed that the information from the EFP program provide farmers with sufficient technical information for most practices. In each case, three respondent believed it applied for some practices. For both the OMAFRA staff and the program reps, three of the respondents said that the technical information was available in the workshops and a further three of each group said they could

refer to outside sources. One program representative noted that the participants always want more information.

Among the local county committee members, 70% said the farmers got adequate technical information for most practices, 24% for some practices and 6% for a few practices. When asked to explain, 31% of the 36 who replied said there was lots of technical information available, 25% said they received an insight into or understanding of other farm operations, 11% said the workbooks were easy to do, and 8% that the participants were already knowledgeable. Seventeen percent of the 36 respondents said more practical solution information was needed and 3% said some sections of the workbook were confusing.

WWW

Nine of the 10 staff members believed the program provided adequate technical information and one did not know. Nineteen of the participants said the WWW project provided them with adequate technical information, three said it did not and six didn't know.

IT/BMPs

The respondents generally were unable to answer this and the next question because they were not directly involved with farmers. One respondent pointed out that the Decima Research report indicated that two-thirds of the farmers had changed their farming practices.

SIB

The respondents concurred that farmers received adequate technical information to determine the feasibility of adopting environmental practices. They believed that they had given farmers the information they needed.

3.3B Did the information acquired provide farmers with sufficient economic information to determine the feasibility of adopting sustainable agricultural or environmental practices?

Researchers

The response to this question was even lower than the previous one regarding technical information. Only one answered yes, three no, three don't know and seven did not reply.

Conservation Clubs

Almost all project staff, 16, said the program provided sufficient economic information. Only two said it did not. Among the participants, 10 said yes, three no and four did not know. Four referred to the fact that they had obtained cost and yield data. Others mentioned the objective was to keep the capital outlay small and that over the long term, practices would pay for themselves.

Environmental Farm Plan

The managers said that the amount of economic information was less than the technical and one needed to know the farm operation to provide economic information. The nine technical advisors voted as follows: most practices (1); some practices (4); few (3); and never (1). They said that there was some information on costs of closing wells and fuel storages, but most of the emphasis was on low cost solutions. There were no adequate cost comparisons and another respondent said they did not believe economic information was part of the objective.

The program representatives said the farmers received adequate economic information for most practices (3), some practices (5), few (2) and never (1). Their comments included: not much information from resource persons (2); economic implications were well explained; there was no time in the workshops to do this; most worked it out themselves; and farmers wanted testimonials.

Among the 60 committee members who answered this question, 28% said they received enough economic information for most practices, 32% some practices, 37% few practices and 3% never. The comments of the 40 who explained their position were as follows: very little economic information, 35%; adequate info from book and instructor, 18%; some practices very costly, 18%; requires too much time, 10%; participants already are knowledgeable, 10%; and more research needed into costs, 8%.

WWW

Five of the staff members said the information from their programs provided participants with adequate economic information, one disagreed, three didn't know and one was not sure. Some believed the committees worked out costs (3) but others said there was not a lot of economic information. The participants, when asked if they received adequate economic information, 13 said yes, 8 no and 5 don't know. One said they worked out their own mental budget, another said the project had no payback so he was unsure of the economics, another said no economic info was given and another believed that all info was thoroughly presented.

SIB

One person believed that the E-Plus program provided the required economic information to farmers. The other noted that this was a weakness of the program but was not part of the Bureau's mandate.

Summary

On the basis of the relatively consistent comments of the respondents, we conclude that the programs provided adequate technical information on various innovations. The generally perceived inadequacy of economic information is symptomatic of a long standing emphasis on the biological and technical characteristics of innovations at the expense of the economic costs and benefits. Greater emphasis should be given to the profitability of innovations. No till, for example, only became widely adopted by farmers when the potential cost reduction possibilities were understood.

3.4 Were there barriers to the adoption of sustainable agricultural and environmental practices which were not addressed by Green Plan?

Committee Members

Nine believed there were unaddressed barriers, four did not and one person said they didn't know. A number of individuals appear to have taken the view that no program could address all barriers. A few believed they had been addressed because the program was so broad.

Specific barriers or issues not covered by Green Plan were identified as: compensation when something is done for the public good; new technologies and practices not considered; no insurance liability for practices that do not work; and misunderstandings by farmers of where watershed planning projects are coming from because their mistrust of the government.

Researchers

Two of the research managers said that the costs of larger projects and socio/economic and market forces were not considered. Three of the researchers said their projects did not consider the economics of adoption.

Conservation Clubs

Among the Conservation Club B project staff, six believed there were barriers to adoption which were not addressed, but seven did not agree. Barriers to adoption identified included: the characteristics of the technology created barriers (6), there was fear of regulations and legal implications (2) and there was a general lack of interest (2).

Twelve of the participants said there were barriers to the adoption of the practices tested on their farm and five said there were not. A list of potential barriers was provided and they were asked to check each which applied with the following results: not yet convinced it will work (7); lack of money (7); lack of time (4); still testing (3); lack of information (2); not sure can manage it (2); may be too risky (2); depends upon others (1); and lack of sufficient acreage to utilize (1).

Environmental Farm Plan

Two managers said there were barriers to adoption not addressed and another said that they learned of barriers to adoption but they were not attempting to address them. Eight of the 12 program reps said there were no barriers to adoption which were not addressed and four said there were. One person said they failed to address the attitude of "this is the way it has always been done". One said there was a lack of information on finances and another that there wasn't enough on economic feasibility.

Among the technical advisors, three gave examples of barriers not addressed, namely, the cost, legislation and lack of infrastructure. The other six did not believe there were unaddressed barriers. Of the 62 committee members who answered this question, 45% said there were unaddressed barriers to the adoption of sustainable agricultural and environmental practices, 53% said there were not and 2% were unsure. Barriers identified were: financial (14); farmers outlook (5); lack of clear info on practices (3); an alternative if practice takes land out of production (3); and generation gap problems.

WWW

Eight of the staff believed some of the barriers to adoption were not addressed and two disagreed. Examples of barriers not addressed included: property rights and individual values which influence why people don't participate; often requires changes in cropping system; economic benefits were not evident or too long term; the belief that wildlife is detrimental to agriculture; funding needed or lack of dollars.

TT/BMPs

Three respondents said there were barriers to the adoption of sustainable practices which were not addressed by their program. The two BMP writers were not asked this question. The three other respondents commented that: some recommendations were not necessarily the norm (appropriate) in some areas; the program provided the info, but not the dollars needed to adopt; financial barriers exist; and the slow adoption of new technology by target groups demonstrated that barriers existed.

SIB

One person believed the barrier to adoption not addressed was economics. The other did not comment.

Summary

The Green Plan programs did not address all barriers to adoption. This finding is to be expected given the wide range of potential barriers. The area most frequently ignored were the economic aspects of adoption. The economic benefits or implications of the practice, the cost of investing and the sources of financing were all cited by the respondents interviewed

as areas not addressed. The results are consistent with those found for the previous question on the adequacy of economic information.

3.5 What are the most appropriate indicators of an environmental program's success?

The issue of how to measure an environmental program's success was found to be difficult to explain to many of the respondents. Two related but different questions were utilized. One which focussed on "factors to use in judging program success" and the other on "indicators of farm level environmental improvements". The answers to the two questions generally differed slightly.

Committee Members

The committee members were asked only about indicators for farm level environmental improvements. The indicators identified included: nutrient levels in surface water (4); acres of conservation tillage practices (2); number of farmers who take up programs; adoption rates of BMPs; several specific conservation practices; and the spread of innovations from a specific area.

Researchers

The research managers believe the most appropriate factors or indicators to consider when deciding whether or not an environmental program was successful were: adoption of practices by farmers (2); yields or environmental outcomes; the way technology fits into a farmers' enterprise; the creation of new packages of technology; and balancing productivity with environmental impacts. The other 10 researchers suggested the following: monitoring of results of changes due to a new practice (7); determining if the project achieved its objectives (3); and economic and technical feasibility. The managers believed the most appropriate indicators of farm level environmental improvements are: water quality; soil quality; productivity as measured by yields; economic achievement, yields and biodiversity.

Conservation Clubs

The Type A and Type B project staff and researchers were asked regarding appropriate indicators when deciding if an environmental program has been successful. They cited a wide

variety of measures including: adoption of farm practices (7); test to see what has happened (5); consider the economics (3); increase in knowledge (3); how well information was disseminated (2); and whether people continue to practice after the government dollars cease.

Appropriate indicators of farm level environmental improvements for their programs identified by the Type B Club staff were: specific practices (4); farmer adoption due to project (3); willingness of participants to discuss and get information; and whether or not they keep doing the specific practice.

Environmental Farm Plan

The staff were asked the two related questions. The managers and the technical advisors were asked what the most appropriate factors or indicators were when deciding if an environmental program was successful. They replied with a wide range of concepts, including: adoption/participation rates (2); ideally measure the environment but attribution (causality) a problem; and the development of farmers attitudes or a personal ethic and commitment (2). When the staff were asked what are the most appropriate indicators of farm level environmental improvements, they said: testing water quality; adherence to separation distances; level of adoption of practices by farmers; action plans and practices; and level of intention of action plans.

Answers given by the OMAFRA technical advisors to the question on farm level environmental indicators included: ask the participants (3); changes in practices (2); whether farmers complete work book (2); attendance at second day of workshop; improvement in quality of water and soil; change in attitudes; and continued interest.

WWW

The staff listed a wide range of indicators to consider when deciding whether or not an environmental program has been successful. These included: if goals and objectives were met (3); landowners feedback and comments (2); participation rate (2); adoption of practices; amount and quality of habitat contributed; continuation by landowners of maintenance, monitoring of on-site items; participants' satisfaction; survey landowners; improved agriculture production and wildlife habitat improvement; and relationships between farmers, naturalists and the local Conservation Authority.

Their responses to the question regarding the most appropriate indicators of farm level improvements for their program were slightly more precise than to the earlier question. Indicators identified included: continued use or application of practices (3) improved water quality (2); stream health (2); increased biodiversity (2); rate of adoption (2); participants' attitudes (2); economic feasibility for farmers; farmers comments/feedback; and other specific criteria such as reduced erosion, herd health, riparian areas and acres of wildlife habitat.

TT/BMPs

The respondents cited four indicators to consider when deciding if an environmental program has been successful. These are: change in behaviour of the farm decision makers; uptake in the usage of CD-ROMs; people in authority make changes in their segment of agriculture; and organizations support activities for farmers.

The most appropriate indicators of farm level environmental improvements from their program identified by the respondents were: farmers who report they make changes due to BMPs; practices used; farmers feedback, ie. client survey and Decima report; uptake of practices by farmers; and improvement in environmental parameters that were a concern.

SIB

The most appropriate indicators to determine the success of an environmental program were believed to be: measures of environmental impacts on the ground; water quality; acres of new practices; adoption of practices; and participants' feelings about performance. One said that measurement should be over the long term not too short a term.

The most appropriate indicators of farm level environmental improvements for the SIB program were believed to be: change in practices and making more people aware at the farm level of what the issues are.

Summary

The respondents were able to differentiate between indicators of the success of an environmental program and those which are indicators of environmental improvements at the

farm level. The answers provided tend to overlap quite a lot with slightly more specific innovations being identified as on-farm environmental program success indicators.

The most frequently cited indicators of general and on-farm successes were: the level of adoption of specific innovations; measures of improvements in the environment such as water quality and achievement of program objectives. There was no consensus among the respondents on either question. The two most obvious types of indicators appear to be measures of the extent to which a new practice or behaviour has been adopted or tried by the farmers and measures of changes in the environment. The latter are program specific. One can only logically evaluate the effectiveness of a program in terms of its objectives and in relation to the part of the environment which is being improved.

4.0 Other Impacts and Effects

4.1 Did any positive or negative unintended impacts and effects occur?

Committee Members

Seven said unintended impacts had occurred and three that they did not. Of the seven who identified unintended impacts, three said they were only positive and four that they were both positive and negative.

The major positive unintended impacts identified by respondents related to or involved: good cooperation among various agencies and groups (3); farm organizations take a leading role (2); international recognition (2); Agriculture Canada provided more dollars than expected; farmers continue to emphasize environmental sustainability; and the Green Plan made possible the Adaptation Council and Stable Funding. (Stable funding preceded Green Plan).

Examples of negative unintended impacts identified were: the lack of involvement by some agencies; the creation of another level of bureaucracy; the level of involvement decreased over time; and the low level of uptake of the EFP.

Researchers

Eight of the researchers believe unintended impacts or effects resulted from their research projects. Five said unintended effects did not result, one said they probably did and one did not know. Seven said the unintended effects were positive and none apparently was aware of any negative impacts. Among the impacts identified were: the joint participation by university, government and regional agencies (3); strengthening of the farm organizations; site specific explosion of interest by farmers; farmer participation; unexpected research findings; and the availability of data on the web (internet).

Conservation Clubs

Six of the staff said unintended impacts or effects resulted from their program while 13 said they did not. In all cases, the impacts were perceived to be positive. The impacts cited were: achieved objective without all the planned chemical treatments; cooperation with

other organizations and projects (2); greater cooperation among farmers from different counties, commodities and farm sizes which resulted in growth in area leadership; higher level of interest than expected resulted in trip to U.S.; have hardware and software which can be marketed; obtained money to make a video; and developed information for a BMP.

Six program participants reported positive unintended impacts while nine did not. Examples they reported included: evaluating a monitor when it was not part of the original design; unexpected yield variations; less fertilizer was needed after hay or manure on some fields; and another found the liquid manure at the bottom of tanks was richer in nutrients despite good agitation.

Environmental Farm Plan

Unintended impacts were reported by at least half of the members of each of the four EFP groups interviewed. All three of the EFP managers believed positive unintended impacts occurred from their program. Two cited the solving of problems associated with fuel storage and the rewriting of the regulations. One said it increased the perception that farmers are acting positively and another cited the new level of cooperation with other organizations and cooperation on new projects.

Six of the program reps said there were unanticipated impacts and all were positive. The other six said there were no impacts. Examples observed and reported included: allowed customer to bargain with the banker for lower interest rate because farm was above average environmentally; some found they were doing better than expected; many indicated a moral obligation to care for the environment; neighbours copied participants; and helped to fight dump site in Timiskaming.

The OMAFRA technical advisors were relatively evenly split on unanticipated impacts. Five reported them, of which four said they were positive and one both positive and negative. Four did not observe unintended impacts. The impacts reported were: involvement of fuel suppliers who were not initially part of the target audience; large number of non-farmers (rural landowners) participants; concerns about privacy; and positive attitude/change.

Of the 65 local county committee members who replied, 53% said there were unintended impacts, 34% that there were not and 13% were undecided or didn't know. Fifteen said the impacts were positive, 7 negative and 6 both. Many of the 27 examples cited were very general and really more comments on the program than effects. Among the impacts identified were: farmers addressed the problems and acted (10); interaction between participants and between groups (farmers and landowners) (2); they now understand the factors which affect the environment (2); and concern for confidentiality (5). Negative impacts included farmers try incompatible practices and the Conservation Authority wants to tell farmers what to do.

WWW

All three staff who believed unintended impacts occurred said they were positive. The impacts identified were: all projects had flexibility; strong community support; discovered land forms not previously aware of; positive reaction to issue of using land for non-food production; greater buy-in to program than anticipated; and a non-farm landowner adopted a practice after reading a magazine article about the program.

Among the participants, 9 said there were and 19 said there weren't unintended impacts and effects on their farm. Of those who reported impacts, four said they were positive, five negative and two both positive and negative. The positive experiences were: cleared up the

creek so now can catch trout and a home for ducks; increased herd health and allowed herd expansion; and development of the woodlot for wildlife.

Negative impacts included: raised water levels which created a wet area in working fields; not pleased with a non-local contractor brought in by Ducks Unlimited; too many geese cause crop damage; trees planted too close to driveway; and weed control around trees not complete. Some of the other problems, such as trees not surviving because of the weather and other farmers not in favour of planting trees on farm lands are not the result of the program.

IT/BMPs

Two respondents said there were positive unintended impacts and two said there were no unintended impacts. They cited linkages and open lines of communication with other Green Plan stakeholders and the level of interest in and sales of BMP booklets to rural non-farm, professional, educational institutions and out-of-province individuals.

SIB

The two respondents both believed only positive unintended impacts had occurred. They cited the relationship with the Innovative Farmers' Association of Ontario and the development of a web page by other people.

Summary

Many unintended program effects were identified by the respondents. Others were obvious to the evaluation consultants from reading various reports and meeting with program personnel. Most of the unintended impacts were positive in nature and most flow from success of specific programs or activities. Many could have been anticipated but were not identified in advance because they were not objectives of the specific programs.

We believe the following positive impacts have occurred:

1. New Working Relationships Were Established

These developed within the agricultural industry, within rural communities, between rural and urban groups and between landowners and various government agencies and non-government agencies. These occurred within the three Accord Committees, within several programs and within specific projects.

2. Existing Organizations Were Empowered

Third party delivery provided existing organizations with financial benefits and prestige. The Ontario Federation of Agriculture and Ontario Soil and Crop Improvement Association, Conservation Clubs and WWW projects gave local groups the opportunity to undertake projects. This experience helped establish the environment which made the Agricultural Adaptation Council possible.

3. New Groups Were Created

The Rural Conservation Clubs and WWW projects brought people together at both the organizational and operational levels. A few of these will continue to undertake similar or new projects.

4. New Information Sources

The web site established at London by AAFC provides a new science based source of environmental information which is available to rural and urban populations.

5. International Recognition

The EFP and BMPs have been recognized by and materials have been purchased by other Canadian provincial and foreign agencies.

6. New Environmental Policies and Projects

The on-farm fuel storage policies and regulations have been rewritten as the result of the EFP program. Another example is the emergency tube project developed with rural fire departments.

The negative unintended impacts tended to be related to a problem associated with or the failure of a specific project. The impacts were relatively minor such as unhappiness with a contractor, excess geese and planting trees improperly.

5.0 Alternative Systems

5.1 Alternative Management Structures

The Green Plan was managed by a series of Committees beginning with the Accord, which made general policy, the Accord Management, which in effect made operational decisions, and the Advisory Committee which commented on policies and programs. Below these Committees, the first two of which represented the various government partners, were the program managers who implemented the programs on a day-to-day basis in cooperation with their project managers and other staff. A number of programs had advisory or decision making committees.

No overall manager who had decision making capability and responsibility was present. For the first part of the program, the AAFC Accord Management Committee Co-Chair acted as a defacto manager. After he was relocated, this function was filled to a major extent by an administrative officer.

5.1A Perceptions of the management systems

Before investigating alternative management systems, the respondents were asked their perceptions of the overall management system.

Committee Members

The Accord Committee members believed there was good auditing and reporting and overall good administration. They were concerned about the lack of communication and the difficulty of understanding the complex management system. The time between meetings was also cited as a problem.

While there wasn't consensus, their comments indicate that the Management Committee was the most satisfied and believed the management system worked well given the number and variety of stakeholders and programs. Their satisfaction probably derives from greater involvement than the other two committees. The only criticism was the level of complexity and the lack of clarity of roles.

The Advisory Committee members stated that the management system was bureaucratic, confusing and complicated. They liked the fact that responsibility was shared and it produced a lot of satisfied stakeholders. One person summed it up by saying it was a bit inefficient, but there may not be a better system if one involves so many people.

Researchers

The researchers generally claimed they either did not have first hand knowledge of or involvement with or they made positive statements about the management system. They said it was good (2), satisfactory, effective, not bad, etc. A few had reservations and one each said it was less clear than SWEEP, driven from the top down and it began good but changes to the AAFC mandate and personnel impaired the program.

Conservation Clubs

The Type B project staff, when asked to describe the Green Plan management system, had a wide range of answers. Three said it was "good" or provided lots of opportunities to participate. Six mentioned the high degree of complexity and bureaucracy which made the system confusing or provided a limited opportunity to participate. Two respondents were uncertain who was in charge given the large number of government agencies involved.

Environmental Farm Plan

Only the three managers were asked about the management system because the others were not directly involved with the three committees. The managers, when asked to describe the Green Plan management system, were not especially consistent in their opinions. One said it was not overly bureaucratic and another said it was complex and bureaucratic, designed so that key players have ownership, but hands off once contracted. The other comments made included: was adequate and dealt with concerns; strange, in that it started out with upper level management (Accord) committee but ended up with very little; and program got direction from program admin and advisory groups.

WWW

The four staff members who believed they had adequate experience with the Green Plan management system to comment made the following points: worked well (2); bureaucratic; and very complex, convoluted and not certain of the ramifications of the upper management

structure. Other supplementary comments were that AAFC was good to work with and the funding approach was very good.

IT/BMPs

The respondents described the Green Plan management system as: comprehensive yet cumbersome; diffuse, flexible and open to farm organization input and influence; reasonably well set up; worked well; flexible when needed; lopsided in decision making process; and overlap of committees members.

SIB

The staff members provided slightly different descriptions of the Green Plan management system. One said it was not bad and perceived the administrator had done a good job. The other looked at the larger system and said it was chaotic, uncontrolled, subverted and uncooperative, but full of good intentions.

5.1B Management system strengths

Committee Members

The Accord Committee members believed, as a result of the management system, the appropriate agencies were represented on the committees, there as an open process in which the agencies worked well together, the stakeholders had input, the staff were dedicated and the money got spent with an audit trail.

The strengths of the management system as identified by the Management Committee members were: brought together players and facilitated their communication; the system created broad support and developed a rough common vision; diversity was allowed, OMAFRA was able to influence the process; and AAFC did not try to dominate.

The Advisory Committee stressed partnerships, involvement of many people who had a lot of different ideas and shared responsibilities. Two of them somewhat reluctantly recognized that a fair amount of dollars got put up for grabs or put to useful purposes.

Researchers

They perceived the strengths to be the cooperation, partnerships, involvement of all stakeholders and good coordination by AAFC. The availability of adequate funding and the ability to remain stable, after budget cuts, were mentioned. The annual meetings, progress reports and field tours conducted by the research program managers were cited as strengths which helped coordinate the research program.

Conservation Clubs

The management strengths identified were: none (2); inputs from lots of people; flexibility; linkages with stakeholder and educated people so they adopted different practices.

Environmental Farm Plan

The strengths were perceived to be: flexibility, lets groups meet own challenges; provides hands off to contractors; and consists of high ranking civil servants who were responsive.

WWW

The program's strengths were perceived to be: multi-agency was good; and the two-tiered committees worked well as the Agreement Management Committee dealt with issues and went to the Accord Committee only if necessary. Other comments of a complimentary nature included: has done a lot of good; good variety of information; and funding turnaround time to landowners for projects was good (2).

TT/BMPs

The system was perceived to have brought all the different parties to the table (2), there was a mechanism to allow feedback up through the system, the committee structure was designed to facilitate collaboration and to expedite decision making. The Ag Canada staff exhibited flexibility given the few members involved.

SIB

The strengths were perceived to be: it had money; it involved people from both levels of government; it touched a lot of ecosystem bases; and a lot of non-scientific groups were involved.

5.1C Management System Weaknesses

Committee Members

The Accord Committee members were concerned that the management suffered from a high turnover of chairpersons, discontent within the Accord Management Committee (2), felt the program was too broad and wide-ranging and the monies were allocated in too large amounts.

The Management Committee members were unhappy with the turnover in the staff of the Accord Committee. One mentioned the problem with both AAFC and OMAFRA due to downsizing and two others specifically mentioned changes in AAFC staff. Those changes meant that time was wasted because new people kept appearing at meetings. Other comments were that the system was so large and complex, they were unsure all players got the message and there was a lack of lateral communication. One commented that it was typical that the highest level people may not have understood what was going on. Decision making was perceived to be highly consistent and there was a struggle to keep the Accord Committee at the strategic level. There were delays in decision making in the opinion of one respondent.

The Advisory Committee members were concerned that there was too much staff turnover (2), the Accord Management Committee spent half their time meeting with the Accord Committee, the system was too broadly based, cumbersome and unwieldy and they were asked to participate for credibility not decision making.

Researchers

The researchers expressed a number of concerns, namely: no professional manager/leader from start to finish after the AAFC mandate changed; the components operated in isolation; inability to adjust to changes in personnel; and cost overruns. A constant theme was the feeling that they did not get a proper allocation of funds because too much went to EFP and TT, private contractors got preference and the fact extensions were treated with greater flexibility. The use of out of province researchers by private contractors was also perceived to be unfair. The other major concern was whether research information is getting out and there were no technology transfer plans to get information to the farm community.

Conservation Clubs

Management weaknesses cited were: Committees did not know their role; slow decisions because of the number of people involved; confusion re overall Green Plan projects; lack of communication from top; and no perception of who was in charge.

Environmental Farm Plan

Again the respondents differed in their opinions. One was not aware of any weaknesses, one said they (Committee) don't meet often enough and inadequate monitoring by mid term. This resulted in failure to seize opportunities to modify the program, ie. commercialization of BMPs was not done and the respondent questions the EFP single window concept.

WWW

The perceived weaknesses of the management system were: the change in Ag Canada's commitment was not explained; lack of publicity regarding projects; and the budgeting/funding was hard for non-profit organizations the way it was established because they had to put up 25% of costs.

IT/BMPs

The weaknesses identified by the interviewees included: the system was slow to respond; decision making was cumbersome because of the number of committees and complexity of the process; cross membership on committees; the Advisory committee had too much power; and people were made managers without prior consultation. One person believed that the design was flawed because the matrix did not separate functions from the topic subject area.

SIB

The weaknesses were believed to be: no attempt to build unity between programs; a lot of room for personal agendas; and after AAFC's mandate changed to marketing, the program lacked priority.

5.1D How did the Green Plan management structure rate in terms of its effectiveness?

Only those respondents who were believed to have adequate experience with the management structure were asked this question. The responses of the various groups are shown in Table 9. Only a few commented on their ratings.

Table 9. Effectiveness Ratings of Management System

Ratings	Committee Members	Researchers	CC Clubs	EFP Managers	WWW	TT/BMPs	SIB
Very Successful	2	3	---	1	---		
Quite Successful	6	4	3	---	3	1	1
Slightly Successful	4	1	1	1	1	3	
Neutral/No Reply	---	1	1	1	6	2	
Quite Unsuccessful	---	---	---	---	---	---	1
Total	12	9	5	3	10	6	2
Average Score	1.8	2.0	1.4	1.3	0.7	1.2	0.5

Environmental Farm Plan

One said very successful because the flexibility accommodates changes and, despite the complexity, is receptive to multi-stakeholder involvement. One said it is slightly successful because it allowed the Green Plan dollars to be kept without getting supplementary grants. The third was neutral and said there were too many meetings and once the decision was made to go ahead, the Committee was no longer involved.

TT/BMPs

The respondents' rating of the effectiveness of the Green Plan were justified by the following comments: there were no surprises because all were at the table; did not have many problems with the system; they tried to redistribute lapsing funds in the third quarter each year; farm organizations were involved with farmers' issues, not the department's; and farmers were involved in development.

SIB

One said it was quite successful and the other quite unsuccessful. One believed the system worked and the other said the small parts (programs) worked fine but the big picture (Green Plan) was a farce.

5.1E Is there a management structure which would have been more efficient?

Committee Members

The committee members were about evenly split on whether an alternative management structure would be more efficient, more effective and more successful. Those who are satisfied stressed that things went about as good as one could expect given the number of stakeholders and complexity of the programs. The others believe that fewer people or a full (single) committee and a full time manager or one person could have run it. Several persons indicated a desire for fewer and smaller committees which had greater consistency in membership and more frequent meetings. A couple of interviewees wanted to make the organizations that received the funds do more managing. (We interpret this to mean they prefer that the program managers accept greater responsibility). See Table 10 for their perceptions.

Researchers

A majority of the researchers, as may be seen in Table 10, believe an alternative management structure would have been more efficient and more effective but not more successful. The wide variety of comments demonstrates, that the researchers frequently were commenting, not on the Green Plan organizational structure, but on the organizational structure and the administration procedures of their own research program. They frequently commented on the allocation of funds, funding procedures and their disadvantages compared to the private sector.

Two themes appeared from those who focussed on the Green Plan organizational structure. They are the need for a full time professional manager and fewer, more continuity of committee memberships. The turnover of managers and committee members was a major problem in their opinion.

Table 10. Perceptions of Alternative Management Structure

	Committee Members	Researchers	Conservation Club	EFP	WWW	TT/BMP	SIB
More Efficient							
Yes*	4	5	2	2	2	1	2
No	5	4	2	1	2	3	--
NR	4	--	2	--	6	2	--
Total	10	9	6	3	10	6	2
More Effective							
Yes*	4	4	2	2	--	2	1
No	5	3	2	1	2	2	1
NR	2	--	--	--	8	2	--
Total	11	7	4	3	10	6	2
More Successful if Alternative							
Yes*	5	2	1	--	--	--	1
No	5	5	1	2	1	2	--
NR	--	--	--	1	9	4	1
Total	10	7	2	3	10	6	2

* An affirmative response indicates the belief an alternative structure is superior.

Conservation Clubs

Two staff believe an alternative structure which would be more efficient, two did not and two were unsure or did not answer. Two would have preferred one committee or one agency to make it more efficient. The others did not make suggestions. Two also believed the management structure would have been effective if there had been only one committee or if they had farmed some of the projects out.

Environmental Farm Plan

Two believed there is an alternative which would be more efficient, namely, a one-person decision maker which would provide more control over some of the programs. Another said the structure should have been what they said was intended. They believed there was no compelling reason for anyone to take ownership.

In relation to a more effective structure, the same two individuals as above commented that opportunities were lost because there was no super manager who devoted all their time to the Green Plan. The measurable outcomes might have been better if "a highly skilled person could have assisted the project manager". This implying that it would not require a high level person full time.

The other respondent believed a General Manager for the Accord Committee could have kept it more in focus. During the last two years, AAFC has only monitored it from a considerable distance because it is no longer part of the MISB mandate. After the above comments, when asked directly if the Green Plan would have been more successful with an alternative management structure, two said no and one didn't know.

WWW

Two believed that a more efficient management structure was possible. Two said it was and one each didn't know and were not sure. One of the two who preferred an alternative said they wanted something more direct and the other was not convinced that third party delivery was necessary. They believed direct funding to Ducks Unlimited or Rural Conservation Clubs may be more efficient. No one said there was an alternative which have been more effective and none believed it would have been more successful with an alternative management structure.

TT/BMPs

One person believed the structure would have been more efficient if one agency were in control because it would take less time to get consensus. Another said the structure was alright, but concerned by cross memberships (on committees) and the unclear mandate of committees. Two believed that the structure would have been more effective if there was a clearer mandate. Initially, it was unclear which committee had decision making powers.

SIB

Both believed an alternative management structure would be more efficient. One suggested a private company with a manager and a board of directors. The other said the personality and commitment of people is the big issue and a single benevolent dictator would be hard to explain but appears to be what is desired.

5.1F Alternative organizations they preferred

The Committee members, program managers and project staff were asked which of four statements best describe their opinion of which management structure would be appropriate. Many took the opportunity provided to identify alternative structures to those proposed.

Committee Members

Half of those who expressed an opinion voted in favour of a structure with a manager and three committees, see Table 11. It was not clear of whom the three committees would be composed or what their responsibilities would be.

Researchers

The six researchers who had an opinion selected five different management structures. The existing manager and three committees was supported by two researchers. The other selected the alternatives as shown in Table 11.

Conservation Clubs

One person believed Green Plan would have been more successful if it had an alternative management structure. A manager plus one or two advisory and working committees was desired by those who made comments.

Note that the five Conservation Club A respondents did not make comments on the management system because they all claimed lack of awareness. The program participants were not asked about the Green Plan management system.

Environmental Farm Plan

When asked which management statement best described their opinion, one chose both a manager and three committees and the other two thought a full time manager and one super or an unspecified number of committees would have worked better.

WWW

When asked explicitly to choose from four alternative management structures, one said there is a need for both a manager and three committees, another said a manager and two committees and one that the Advisory Committee wasn't needed.

Table 11. Management Structure Believed Most Appropriate

Alternatives	Committee Members	Researchers	CC	EFP	WWW	TT/ BMP	SIB
Manager only	1	1	--	--	--	--	--
Manager & 3 committees	6	2	4	1	1	1	2
Manager & 2 committees	1	1	--	--	1	1	--
Manager & 1 committee	1	--	--	2	--	--	--
Only 3 committees	1	1	--	--	--	--	--
Send \$ to users	1	--	--	--	--	--	--
Only 1 committee plus managers	1	1	--	--	--	--	--
Each program have own management system	1	--	--	--	--	--	--
Other/No opinion	1	3	10	--	8	4	--

TT/BMPs

The respondents were hesitant to comment on alternative structures. One said there was a need for both a manager and three committees. One suggested a manager plus the Accord Management Committee plus an Accord Committee which met semi-annually to answer broad strategic questions.

SIB

When asked if there was a more effective structure, one said yes and referred to the need for a private company. The other said no and added that it is doubtful if the structure is important when considering effectiveness. One believed Green Plan would have been more successful with an alternate management structure and one did not know. Both believed that the Green Plan needed both a manager and committees.

Other Data

The variation in the number of Committee meetings held is shown by year in Table 12. All the Committees met most frequently in 1992. The Advisory Committee has not met since January 19, 1994. The Accord Committee has only met an average of 2-4 times per year since 1992. The Management Committee has met 3-4 times per year for five years which is almost one every other month, on average.

**Table 12. Committee Meetings Dates
1991 to 1997 to date**

Year	Accord	Advisory	Management
1991	3	2	—
1992	7	9	10
1993	3	2	9
1994	4	1	6
1995	4	—	5
1996	2	—	5
1997	—	—	2
Total	23	14	37

The Advisory Committee met regularly at first, then when attempting to determine its terms of reference, quit meeting. Some members told the evaluation consultant that they had no idea why no further meetings were held. It appears they had achieved their goal which may have been to assist in the design of programs or only to give the appearance of participation.

The Accord Committee met rather infrequently, on an average of once every three months since 1992. The turnover in membership and variation in attendance meant there was limited consistency of membership or "corporate memory".

The Management Committee appears to have held the real effective power and made the necessary decisions. The AAFC representative acted, we understand, as the de facto program manager for the first three years until he was assigned to other duties.

There was a high degree of turnover in Committee membership and in the Co-Chairs of the Accord and Management Committees. Table 13 illustrates the attendance by members of the Committees. The Accord Committee had had eight Co-Chairs and the Management Committee five Co-Chairs. The only Chair of the Advisory Committee was Don Hill who replaced Dona Stewardson who was Acting Chair for a few meetings at the beginning.

The management structure was further complicated by multiple membership of many individuals on related committees and as staff of various programs. Some individuals were members of so many committees, they almost appeared to be advising or reporting to themselves. The Green Plan management system in its entirety, took participation and consultation to an extreme level. While desirable, it should be remembered that consultation, participation and partnership building are a means to an end, not an end in themselves.

The Green Plan management system and its deficiencies mirrored those observed and commented upon by the evaluation consultant when evaluating the SWEEP program in 1993. At that time, it was stated:

"The major weakness of the program identified was the use of committees rather than individuals in the management process. The committee

framework reduced communication and slowed the decision making process. We believe there was a need for an organizational structure which clearly identified someone who was responsible for and provided them with adequate authority to make decisions quickly."

The responses of many of the individuals interviewed strongly support this same conclusion regarding the Green Plan.

**Table 13. Attendance at Meetings by Committee Members
1991 to 1997**

Agency	Committee			Total
	Accord	Advisory	Management	
AAFC				
Mike Hicknell	21	14	15**	50
Bruce Bowman	3	--	29*	32
Fred Mooney	16	5	23**	44
Frank Marks	18*	--	--	18
Gary Nelson	6	2	6	14
Sharon McKay	8**	--	--	8
Conrad Pacquette	7**	--	--	7
Fran Cullen	4**	--	--	4
OMAFRA				
Maxine Kingston	5	--	30**	35
Galen Driver	10	3	8**	21
Howard Lang	--	--	10*	10
Len Senyshyn	8	--	13**	21
Henry Olechowski	1	--	14*	15
Vern Spencer	9**	--	--	9
Frank Ingratta	12**	--	--	12
Jim Ashman	4**	--	--	4
David Thompson	2**	--	--	2
Jim Weeden	1	1	4**	6

* Committee Member

** Co-Chair at some time

Agency	Committee			Total
	Accord	Advisory	Management	
Ontario Ministry of Environment and Energy				
Jim Eddie	--	--	23*	23
Phyllis Miller	3*	--	1	4
Jim Ashman	11*	--	--	11
Environment Canada				
Donna Stewart	--	--	5*	5
Murray Brooksbank	1	--	22*	23
Laurie Maynard	1	--	13*	14
Gary McCullough	3	1-	12*	15
Harvey Shear	10*	--	--	10
Rick Pratt	4*	--	--	4
Ontario Ministry of Natural Resources				
Raymond Biette	1	--	14*	15
Rae Horst	6*	--	--	6
Jim Gosnell	6*	--	--	6
Bob Beecher	1*	--	--	1
Donna Wales	--	--	7**	7
Fisheries and Oceans Canada				
Victor Cairns	--	--	6*	6
John Cooley	6*	--	--	6

* Committee Member

** Co-Chair at some time

Individuals	Committee			Total
	Accord	Advisory	Management	
Don Hill	9	14**	--	23
Earle Muir	--	9*	--	9
Mike Pembry	2	12*	--	14
Jack Rigby	--	12*	--	14
Graydon Bowman	--	5*	--	5
John Lounds	--	12*	--	12
Jim Magee	--	2*	--	2
Freeman McEwen	1	11*	--	12
Lucienne Bushnell	--	8*	--	8
Dona Stewardson	3	12**	--	15
Tom Prout	1	5*	--	6
Henry Neutens	2	7*	--	9
Virgil Martin	1	1*	--	2

Summary

We believe the managementsystem was, as stated by the respondents, excessively complex, diffuse, slow and cumbersome. The system of three Committees plus an administrative officer, but not a manager was designed more to involve the many parties and partners them to facilitate accountability or make decisions with dispatch.

In 1993, in relation to the SWEEP management, we stated:

"The program would have benefited from the design of a single program administrator, with at least one assistant, who would have been solely employed directing SWEEP. Surely, a \$30 million program warrants at least one overall full-time manager."

Four years later, we believe there was need for one full-time or even a mainly full-time manager to direct the \$25.6 million Green Plan program.

5.2 Alternative Delivery Mechanisms

5.2A How effective was the delivery approach of the Green Plan?

This evaluation question assumed that third party delivery was the regular program delivery method. A range of approaches were actually utilized so for each program, the actual delivery method or methods will be identified.

Committee Members

The Committee members rated third party delivery as shown in Table 14. The Advisory Committee respondents rated the delivery methods slightly lower than the Management Committee members. The Committee members made a wide range of generally favourable comments which indicate they believe the program was well delivered, they approved of third party delivery and they like not having to directly deliver projects themselves.

Researchers

This program was managed and conducted by the Research Branch of AAFC almost entirely by their own staff who had either or both research and administrative roles. Some specific projects were contracted out to university and private researchers. These respondents, as may be seen in Table 14, rated the program delivery quite highly. Twelve of the 13 respondents who had an opinion rated the approach as very or quite successful. Their comments indicated they had attempted had been made to make the system work. One person liked the ability to be able to deal one-on-one with their manager. Objections raised included the number of levels of administration and the costs involved.

Conservation Clubs

The Conservation Clubs were managed by the MISB of AAFC. The five Type A Club members who answered this question were relatively positive in their ratings, see Table 14, and their comments regarding program delivery. They stressed there had been good communication, a good newsletter and the people were knowledgeable. Among the Type B Club staff, a number were positive but others had concerns. One simply stated that third party delivery is good, one mentioned they had access to the manager, another that the

administrator was very responsive to enquiries. One individual found the delivery confusing, two rated it low because of the reorganization of Agriculture and AgriFood Canada's priorities and another claimed there were delays in decisions because the manager was busy.

Table 14. Effectiveness of the Delivery Approach of the Green Plan Programs

Ratings	Committee Member	Res	Conservation Club		EFP			WWW	TT/BMP	SIB
			A	B	Managers	Pgm Reps	OMAFRA			
Very Successful	3	7	2	2	2	11	8	2	4	—
Quite Successful	6	5	1	3	—	1	—	2	2	2
Slightly Successful	3	1	2	4	1	—	—	3	—	—
Slightly Unsuccess	—	—	—	—	—	—	1	2	—	—
Neutral/No Reply	2	2	—	5	—	—	—	1	—	—
Total	14	15	5	14	3	12	9	10	6	2
Average Score	1.7	2.3	2.0	1.1	2.3	3.0	2.6	1.2	3.3	2.0

Environmental Farm Plan

This program was delivered by the Ontario Federation of Agriculture who sub-contracted the work to the Ontario Soil and Crop Improvement Association. The managers said that some programs were more effective than others, don't believe the government could have delivered the EFP or BMPs and that third parties have marketing capability, credible staff and client confidence. The OMAFRA technical advisors believed that the perception of who runs the program was positive (4). Other comments were: good program; peer review process was a hold-up at times; success depends upon the program reps; less expensive to deliver; and one said that people bought into the program as a government program going through a farm organization, not as a grass roots program.

The EFP program reps, who unanimously believed the program was very successful, believed that farmers appreciate the fact that a farm organization is involved (4); OSCIA has credibility (2); and membership throughout the province (2). One noted that the infrastructure was already in place from the Land Stewardship and Permanent Cover Programs. Only one mentioned the lower level of participation than expected.

WWW

This program was delivered by the Canadian Wildlife Service of Environment Canada under contract to AAFC. Those who rated the delivery approach most highly said it was good to get a third party involved and the CWS had flexibility to deliver it creatively. Of the "quite successful" respondents, one said there were few difficulties, but the other said that CWS was too busy, understaffed and it was hard to get a response. One person who perceived it as slightly successful said there was too much concern with details but another said it worked. The two who were most negative said it was due to lack of efficiencies and lots of double checking and control to keep Ag Canada satisfied which caused awkwardness and time delays.

TT/BMPs

These programs were delivered by the Ontario Federation of Agriculture. The delivery approach was considered, as may be seen in Table 14, to be very successful by four and quite successful by two respondents. The reasons given for these positive ratings varied. They included: can deliver at significantly lower cost than the federal government; while don't know costs, things flowed well; very quick and reasonably flexible; there was a willingness to take risks and be flexible; there were some concerns about EFP; and SIB was a weak link that didn't appear to deliver much.

SIB

This program was delivered by the University of Guelph under contract to AAFC. Both respondent said the Green Plan program delivery approach using both AAFC staff and third party agencies was quite successful. One interviewee pointed out that lots was done and the other that there is a need for a contractor to be closer to the clients.

5.2B What are the benefits of third party delivery?

Committee Members

The perceived benefits of third party delivery are: lower costs (3); greater willingness of farmers to provide information and cooperate (3); more cognizant of clients and more oriented to their needs; more "buy in" and involvement by stakeholders; greater community participation and encouragement of farmers to invest their own money. Six of the 14 Committee members interviewed had direct program delivery experience.

Researchers

The researchers believed the benefits of third party delivery extend from themselves to their research to the farm community. The major reasons were: cost effective (3); researcher gains experience from working with others (3); opportunity to bring in both more and a broader range of experts (3); research gets done more quickly and system is more flexible (3); and the contacts with farmers allows better diffusion of findings (2). They also noted that it allowed the use of people already in place and creates strong grass roots which will have an impact on research in Ontario. One individual said they were not aware of any benefits.

Conservation Clubs

The project staff gave a wide range of benefits including: cheaper (2); excellent when do not have lots of staff; farmers more comfortable when delivered by farm organizations (2); no political baggage, less perception as a government program, third parties get job done (2); involves a lot of people; and not sure there are any benefits.

Environmental Farm Plan

The managers believed the benefits of third party delivery were: a greater commitment and involvement when a third party buys in; greater trust existed; and had EFP been developed and delivered by OMAFRA alone, it would not have succeeded. The third individual assumed that third parties can be more successful because they know how to adapt to conditions and have greater credibility and less infrastructure to debate decisions.

The OMAFRA technicians believe farmers buy into programs which are farmer driven or they are easier to sell when delivered by OSCIA (6). Other benefits included greater flexibility, developing networks and allows OMAFRA staff to concentrate on technical aspects. The program reps perceive that the benefits to be: they are able to speak from a farmer-to-farmer perspective (3); OSCIA staff not seen as a threat to farmers; less bureaucracy (2); non-biased information; third party takes ownership; and personal contact between county committees and OSCIA staff.

WWW

The benefits of third party delivery were perceived by the staff members to be: credibility and accountability (2); efficient because they had the contacts to make partnerships (2); have more of an appreciation of problems; and understanding of needs (2); lots of flexibility because not bound by government restrictions; there was trust between agencies and the committee; and the concept of a neutral agency sounds good.

TT/BMPs

The benefits identified included: higher participation rate than if delivery by AAFC or OMAFRA; product was focussed to client's needs; less bureaucratic; there were financial incentives for efficiency and effectiveness; an efficient decision making process; quick and easy access to a delivery force; and empowerment, ownership and flexibility.

SIB

The benefits of third party delivery, in the opinion of the staff, were that it is innovative, broadens the network providing new viewpoints and perspectives. It is also seen as being generally more accountable for budgets, timeliness of work and reporting and better for deadlines.

Among the 24 OMAFRA extension staff, a wide range of advantages to third party delivery were identified. These include: more acceptable and/or credible to farmers (10); brings a fresh perspective and commitment (8); greater efficiency or reduced costs (5); brings expertise (3); and frees up government staff (2).

5.2C What, if any, are the disadvantages of third party delivery?

Committee Members

Half of the committee members (7) said that third party delivery can lead to a loss of control. The other issue of general concern was the time spent on building relationships, making decisions, learning about management and accountability by the third party. Basically, they recognize that new social and organizational relationships must be established, serviced and monitored. These organizational relationships and working norms are new to most people and initially require substantial time commitments.

Researchers

Three of the researchers mentioned the loss of control, in one case specifically by Ag Canada, and three said it is too costly. The staff, who are accustomed to direct delivery of internal research projects, believe they are more in tune with appropriate resources. Two believed research was being shared with the private sector contractors who are not equipped to do the work. One said that when funds are given to a third party, they may pass the money on to consultants who do not answer the basic questions. Third party researchers were perceived to be cost sensitive and tend to cut corners. Another AAFC researcher emphasized the variation in scientific rigor they have observed in third party research reports. The answers illustrate the fact that allocating research activities to third party suppliers is not perceived by government researchers in the same way as the allocation of service delivery activities by staff who regularly deliver programs.

Conservation Clubs

Again a range of comments were provided by the Conservation Club staff members. They ranged from none to more bureaucracy (3); may be higher cost; the training requirements are onerous; takes more time to communicate; rules must be clear; need central administration group; and the managers may lose direct contact with farmers.

Environmental Farm Plan

The managers perceived the disadvantages to be: loss of control over activities as programs are only marginally steerable; may have to develop systems for control and program delivery;

potential conflicts of interest in that farm organizations may not acknowledge or be covered by government regulations. One explained that a bureaucracy had to be created because of the complex structure of all the farm organizations involved. They believed a multi-level third party agency was created to meet political requirements and this has costs. One also claimed that program delivery is not a money maker for the third party.

The OMAFRA technical advisors identified specific limitations of EFP rather than third party delivery limitations. These included: variability in staff skills (3); may not have enough expertise; government gets less profile and credit for resources provided; an organization must get up to speed to handle personnel issues; and two organizations have to work together. The program reps said, with third party delivery, it is harder to control and keep province-wide standards, it may add an extra cost due to administration and the message may be more diluted.

WWW

The disadvantages of third party delivery as identified by program managers and project staff were: lots of red tape and response is slow (2); the accountability requirements are excessive; no control of own budget; extra level of administration; can interfere with priorities established by own membership vs other bureaucracies; and need experience in agriculture to be effective.

TT/BMPs

The disadvantages identified included: hard to control scheduling of funds; costs were added at start because they were new to the task; the risk of inexperienced organizations; large number of people involved; sometimes conflicting people to work with; and more time was required to make decisions. One said that acknowledgement of government involvement is a real problem.

SIB

One person said that third party delivery can create poor linkages and cooperation and people may be left out. The other didn't think there were any disadvantages but mentioned maintaining technical and professional integrity and paying attention to the overall goals of the

program. The OMAFRA extension personnel mentioned several problems related to: lack of experience, technical capability and backup (6); increased costs or lack of efficiency (6); potential burnout of volunteers (2); variation in procedures between projects and/or areas (2); provides competition for funding (2); fractures the source of extension programs; need to monitor for bias; and slower to get consensus.

5.2D Is third party delivery more expensive than direct delivery by government staff and, if so, by how much?

Committee Members

Two of the respondents believe third party delivery is more expensive, 10 do not and 2 are undecided. The reasons used to justify their beliefs were extremely varied. They demonstrated the lack of a definition of costs because some consider only operating while others include overhead. The points were made that: there is no cost data; other agencies use resources, not just governments; more expensive to whom?; the salary scales of a third party delivery agency may be lower; and the process is slower due to an extra layer of bureaucracy. One perceptive individual noted that we need to measure impacts as well as costs.

We asked the Committee members and representatives of the other programs to estimate the differences in costs. Too few were capable of making estimates to draw any conclusions.

Researchers

Half the researchers (7) believe third party delivery is more expensive than direct delivery by government staff, five disagree, one did not know and one said they are both less and more expensive. Four appear to have qualified their belief that costs are higher by indicating that costs are sometimes, but not in all cases, higher. One pointed out that government structures were available and that creating new structures adds to costs. We observed at least one respondent who appeared to ignore government salaries and overheads when comparing costs to third party researchers. The individual who said yes and no to the question did so to point out that initial costs may be higher but they are offset by increased effectiveness.

Conservation Clubs

Very few staff were willing to comment on the relative cost of third party delivery. Two said it was more expensive, three that it was not, one was not sure, one said maybe and the remainder had no opinion. The points were made that even though a lot of money was spent for program delivery, a lot of time was also spent to help them deliver the program and the cost of reporting, delivery and moving money must be considered.

One person thought that third party delivery was 25% more expensive and one, 33% cheaper. Two said the benefits were worth the extra costs because you need two or three government agencies involved and the other got a level of comfort of talking to people who understand. One individual believed lots of time was wasted and the participants were confused by the delivery.

Environmental Farm Plan

The managers disagreed on whether third party delivery is more expensive than direct delivery. One said yes where an alternative is possible, but this was not "in the cards" for the EFP. One said it should be less, but is not as inexpensive as people anticipate and one believed it was cheaper because they did not have to go to committees for decision making.

The OMAFRA technical advisors disagree on the relative costs of third party delivery. Four believe it is more expensive, three do not and two don't know. The reasons given for greater costs are the need to duplicate the OMAFRA delivery system, more people were involved and the peer review process is quite time consuming.

The program reps believe it is usually not more expensive (10) or they don't know. One person pointed out that nobody works full time, thus it is less costly.

WWW

Three respondents believed that third party delivery is more expensive than direct delivery by government staff, three did not and one person was unsure. The perceived higher costs were: an extra layer of management costs dollars; initial costs are higher; and since government staff have to justify their existence, they require more reporting with the result that there is some loss in flexibility and more regimentation.

Those who believe it is less expensive stated that the in-kind resources add value to the project and it is low cost at the local level but do not know how much Environment Canada charged for their time. Two said they were unsure how much more expensive third party delivery was but one estimated 20%. The one individual who claimed the benefits are worth the extra costs justified saying this because there is greater flexibility using resources already in place, ie. Ducks Unlimited and farmers working towards mutually agreeable solutions to mutual problems.

TT/BMPs

One interviewee believed that third party delivery was more expensive, two said that it isn't and one was unsure. They stated that it is difficult to know because there are no reliable public sector benchmarks. One commented that the administration of BMPs took 10% of the total budget. The one who said third party delivery was more expensive claimed that government staff were still involved by being at large meetings. One said that OSCIA's accountability to the coalition was questionable. (Note, the respondent was referring to third party delivery across Green Plan, not to TT/BMPs because OSCIA did not deliver these programs.) One pointed out that it depends on the complexity of the program and BMPs are more expensive with third party delivery. Another stated that while the perception is yes, more expensive, in actuality, it is more cost effective for some programs.

Only one person answered the questions on costs and benefits. That individual believed that the cost of third party delivery was 30% higher and not worth the cost to hire a field manager because government staff were already at the meetings.

SIB

The issue of expense of third party delivery split the respondents. Among the staff, one believed it was more expensive and the other didn't know. Seven of the OMAFRA extension specialists believed it was more expensive, six do not, five don't know and the remaining six did not express an opinion. Among those who believe it is more expensive, the reasons expressed were: takes a big chunk of dollars off the top that does not go to the project; there

is some duplication, third party still uses government services that are not factored into third party costs; when BMPs had to be rewritten, the fixed salaries of government employees were overlooked; a lot of salary dollars went into attending meetings; makes for duplication of effort and increased administration; have longer learning curve as people have to be trained; and the payoff is in the long term only.

The reasons given for claiming that third party program delivery is less expensive include: on average, less costly but on a results basis, on par; less overhead because only paid when working; and not using high paid technical people for administration.

5.2E Are the benefits worth the extra costs?

This question assumed that some respondents would state that third party delivery is more expensive. Since relatively few of the interviewees who agreed that costs are higher, also answered this question, the number of responses was quite low. Even those who said the benefits are worth the costs gave various justifications.

Committee Members

Only two said the benefits were worth the extra costs. They cited the uptake in the community, ie. greater uptake because of third party delivery and the building of local leadership with trained people and stakeholders who are able to carry on.

Researchers

Only two researchers believed that third party research is both more expensive than and worth the difference from delivery by government staff. The reasons given related to greater accountability and clarity and greater flexibility.

Environmental Farm Plan

Of the very few respondents who said third part delivery is more expensive, only one made an estimate which was 10-15%. They believed this was worthwhile in the case of EFP.

SIB

When asked if the benefits are worth the extra costs, the staff did not know. The OMAFRA extension staff generally did not reply but the following comments were made. The three who believed they were worth the extra costs said only in short term and only if we stay on the job, the turnover in staff could be a minus. Those who did not agree said that lack of knowledge of research protocol and farm organizations could/should provide program support or delivery at reasonable cost.

5.2G Is there a more effective delivery system than the one they used?

Committee Members

Only 5 of the 14 committee members believe there is an alternative delivery system which would be more effective in achieving the program's objectives. When asked what these systems would consist of, they recommended: contracting with stakeholders; increase the number of fringe groups involved in setting up programs; give work to a private contractor; and privatization so they operate on cost recovery such as BMP books. (Note, BMPs were not delivered by a private contractor.)

Researchers

The researchers were almost unanimous that there is no more effective alternate delivery system than direct delivery by the Research Branch of AAFC. One suggested direct delivery combined with paid consultants which is, in fact, how the program was delivered.

Conservation Clubs

Alternatives to direct delivery by AAFC were proposed by five individuals. These included: having farm organizations do it; expand EFP; Environmental Farm Coalition Structure and Agricultural Adaptation Council to do administration; let AAFC Harrow (Research Branch) deliver the program instead of AAFC Guelph (Market and Industry Services Branch); and AAFC or any agency with enough staff to do it properly.

Environmental Farm Plan

Among the three managers, two said there was not a more effective delivery system than third party delivery in achieving the Green Plan objectives. The reasons given for this position was that Green Plan focussed on multi-stakeholders and partnerships and this was one of the

Kempenfelt objectives. The manager who disagreed said the option of turning over dollars rather than contracting for services was never considered. (Note, a number of the third party arrangements, including EFP, were contribution agreements, not contracts.)

Four of the OMAFRA technical advisors believe a better system exists, two disagree and three don't know. One proposed tendering the program to government, Soil and Crop (OSCIA) or any other organization. (We assume that they meant OMAFRA when they refer to government.) One suggested separating from government programs and one gave an example of how to reduce EFP costs by having one program representative for two or more counties. (This was subsequently implemented.)

Only two of the program reps believed an alternative system would be more efficient. Nine disagreed and one did not have an opinion. All of the recommendations provided were ways to reduce the EFP, not Green Plan delivery costs. This is understandable because of their greater experience with EFP than with Green Plan. For the record, the suggestions were: fewer program reps; use video conferencing; overcome language barriers; and the homestudy package was not successful.

WWW

When asked if there was an alternative program delivery system which would be more effective in achieving Green Plan program objectives, only one said yes, two no and four didn't know. Three suggestions were provided, namely: use OSCIPAP as an example because they made contacts; need OMAFRA staff to be involved on the local level; and have one layer, ie. let a non-government association work directly with government agency to deliver the program.

TT/BMPs

Two respondents said an alternative delivery system would be more effective and two said there isn't such a system. One proposed using the current system for more accountability for farmer-to-farmer delivery. Another proposed going through the Can Adapt system but would

need control and fairness measures. One who did not believe there is an alternative delivery system said there is need for an outside agency to facilitate collaboration and partnerships.

Other Data

In order to evaluate alternative program delivery systems, it is useful to consider the models utilized by Green Plan. Most programs involved a mix of systems. The alternatives are:

1. Direct Delivery by AAFC or OMAFRA

In this model, staff deliver the program directly to clients.

2. Contract Programs

In this model, the government ministry or agency contracts either through or outside of Supply and Services Canada (SSC) for specific goods and or services. If the project goes through, Supply and Services Canada, it is usually tendered and AAFC pays a fee to SSC for their services. If SSC is not involved, the project may be tendered or sole sourced.

3. Contribution Agreements

In this model, AAFC enters into a legal agreement with a legal entity to provide financing for specified activities. Note, this agreement does not go through Supply and Services Canada. It allows the third party greater flexibility in managing the program. Many research agreements with universities and foundations are of this type.

The Research program was primarily delivered as an inhouse program with contribution agreements and contracts through SSC to private researchers and university professors.

The Rural Conservation Clubs program was delivered by MISB through contribution agreements with the various Clubs.

The Environmental Farm Plan was delivered by means of a contribution agreement between AAFC and the Ontario Federation of Agriculture on behalf of the Ontario Farm Environmental

Coalition. The OFA then sub-contracted with the Ontario Soil and Crop Improvement Association to deliver the program.

The AAFC signed contribution agreements with OFA to manage and deliver the BMPs and Technology Transfer programs. OFA contracted with various private sector agencies and consultants to write, edit and print the BMPs and conduct surveys.

The WWW program was managed by the Canadian Wildlife Services of Environment Canada through a letter of agreement with AAFC. The 10 3W projects were initiated through contribution agreements with AAFC.

The SIB program was delivered by the University of Guelph under a contribution agreement with AAFC.

Summary

We cannot accurately determine the incremental costs of third party delivery until such time as benchmarks on government delivery costs have been completed. The opinions of the respondents regarding third party delivery were mixed with many people providing responses which indicate a limited understanding of all the potential cost factors or the actual levels of costs.

The responses of some individuals appear to be influenced in part by self-interest. To ascertain the degree to which the estimates provided are accurate is a major auditing activity. One of the concerns expressed by respondents was that, even though third party individuals were hired to provide services, they depended on government staff for expertise. Others pointed out that unless third party staff are already quite knowledgeable, they have to be trained. There are obvious but difficult to document start-up costs to recruiting, training and monitoring a new third party program delivery system.

The extent to which third party delivery is effective depends upon the type of program being delivered and who the third party is. Third party delivery works best where the clients identify more closely with the third party than the first party. This was in the opinion of many

respondents in regard to the EFP. It also works better where the program is primarily action oriented, requires on-site delivery and is of intermediate technical requirements. In some cases not-for-profit, agencies are more acceptable to the clients than private companies.

One consideration must be the degree of accountability. The first party needs to develop precise, measurable objectives which are agreed to by the delivery agency. The work activities of the third party must be monitored to assure performance. Accountability should be maintained in all situations.

We noted that research and consulting contracts issued by third parties operating under contribution agreements were not always competitively tendered. Greater accountability and appropriate systems need to be established to ensure that work is allocated on the basis of expertise. Third parties must always have the skills and technical expertise to provide the services involved. It should be recognized that contracting, especially research contracting, requires a thorough knowledge of the subject matter, research buying procedures and current costs.

There is a need to strengthen the research and evaluation buying expertise of both first party program contractors and any third parties given this responsibility. One way to maintain accountability would be to require third party contractors who purchase research or other services to always tender those projects over \$15,000.

Control has two dimensions, financial costs and production of specified deliverables. The contracting cost control system generally requires the contractor to submit regular invoices which are evaluated in terms of government expenditure regulations. Contribution agreements require the recipient to submit a professionally signed audit which verifies that standard auditing procedures were employed. The evaluation of deliverables may be, but is not necessarily, less rigorous with contribution agreements even though there is less frequent reporting and often the "product" is specified in less detail.

Accountability is essential in any third party delivery system. We were surprised by the fact that, in some cases, such as the EFP and BMPs, additional levels were created when third

parties sub-contracted work to a second non-government agency. The rationale provided indicated a greater sensitivity to farm organization politics than cost control. Partnerships, alliances and relationship building are nice, but hard to justify if they cost taxpayers more than direct delivery.

CONCLUSIONS

The following general conclusions can be drawn from the program evaluation of the Green Plan. Since the Green Plan consisted of seven distinct programs, it is difficult to generalize as to its achievements. Because our terms of reference did not involve the evaluation of each of the programs, only general conclusions are presented.

1. In general, the Green Plan can be considered a success in that most of the programs came close to achieving their objectives. A substantial body of new knowledge was created by the Research Program, the largest component of the Plan. Several innovative means of delivering information to farmers were utilized including the Environmental Farm Plan, Best Management Practices publications and videos and the use of groups by the Rural Conservation Clubs and the WWW programs to undertake environment demonstration projects.
2. The Green Plan provided a vehicle by which many government departments, both Federal and Provincial, farm organizations, non-government organizations, farmers and non-farm rural residents were able to work together. New alliances and relationships were established which should facilitate future cooperation. A few of the farmer and farmer-rural resident groups are expected to continue existing activities or initiate new projects.
3. The management structure which consisted of three Committees was perceived to be complex, confusing and slow to respond. The structure would have benefitted from the designation of a fulltime manager who could have provided greater continuity, overall leadership and more timely decisions. The Accord Committee suffered from substantial turnover in membership. The Advisory Committee suffered from a lack of consensus regarding their goals and finally quit meeting part way through the life of Green Plan. The Accord Management Committee carried the bulk of the responsibility for managing the program but suffered from constant turnover in membership. The AAFC Co-Chair who was defacto manager of the Green Plan was reassigned part way through the program.

4. Third party and multiple party delivery procedures and systems were generally successful but few conclusions can be derived from this evaluation regarding the issue of third party delivery. We can draw no precise conclusions as to the relative costs of third party versus in-house delivery. Until benchmark studies of in-house delivery have been completed, all comparisons will be estimates at best. It is becoming apparent that third party delivery may soon represent the only means of delivering agricultural programs if government staff continue to decrease in numbers.

Third party delivery deserves significant study to determine what services, under what circumstances can be best delivered, to what clients, to what costs. Delivery programs must be client and situation specific. At present, the concept is poorly defined and may be utilized under totally inappropriate circumstances.

5. The relative success of many of the programs delivered by third parties was determined, to a large extent, by the quality of the project personnel. Given the probable growth of third party delivery, a need exists to provide potential leaders with training in project management. Such training would benefit the individuals and rural organizations and allow governments to deliver programs more effectively.
6. The issue of how to capture and utilize what has been learned from the Green Plan programs requires consideration. The Research program was designed to capture original data. This has generally been quite successfully accomplished. This new data and some from the Rural Conservation Clubs Type A projects, several of which were in reality research projects, were discussed at a workshop and will be, we understand, entered onto the AAFC website.

We are concerned that much of what has been learned as part of the Rural Conservation Clubs Type B projects and the WWW projects will simply be lost. Many important lessons, both of a managerial and technical nature, can be derived from the experiences of the program managers, staff and participants. Our mandate was to evaluate them as a component of the overall program, not to conduct the detailed case

studies which appear appropriate. Consideration should be given to conducting further studies on these programs.

7. The overall evaluation function was not well designed or coordinated. Four separate companies conducted the initial evaluation assessment and evaluation, a benchmark survey, a detailed program description using logic matrices and the final evaluation. The evaluation design was changed from the initial to the final evaluation. The evaluation assessment prepared during the Initial Evaluation was not utilized in the Final Evaluation and the benchmark survey was not repeated. The evaluation activities were initiated late, time to complete the initial evaluation was inadequate and the components were underfunded.

RECOMMENDATIONS

Based upon the data analyzed and the conclusions drawn, we submit the following recommendations:

1. Management Structure

All future large, multi-program government initiatives give very serious consideration to the designation of a program manager. This individual would be responsible for the overall management and coordination of the policy making and management committees, the project managers, general financial control and external relations. This individual would have both the responsibility and authority to provide consistent, timely management to the program.

2. Third Party Delivery

Third party delivery, given financial constraints and reductions in government staff, is probably inevitable. Substantial research effort is required to determine what services, under what circumstances, can best be delivered to which clients at what costs. We cannot compare third party delivery costs to first party delivery until the costs of both types of delivery have been systematically documented. Such studies should be initiated utilizing available internal government records, the audited financial reports provided by contribution agreement participants and contract costs filed by consultants with Supply and Services Canada.

3. Accountability

One of the challenges of third party delivery is maintaining accountability. All such agreements should ensure that:

- A. The Ministry staff do not come under undue political pressure so that staff can maintain control consistent with government policies.

- B. Personal conflicts of interest do not arise from multiple, conflicting committee memberships and job responsibilities.
- C. The delivery agency has the necessary expertise to deliver the program properly.
- D. The funds allocated are not excessive given the activities to be performed, that is, value for money is assured.
- E. Third parties should not be allowed to sub-contract whole projects. Fourth and fifth level party delivery should be avoided.
- F. The delivery agency follows standard government policies when purchasing services such as equipment, research, consulting, etc.

4. Club Experiences

We recommend that a study be initiated to capture the management and extension experiences of the Rural Conservation Clubs Type B projects and the WWW projects. Many useful lessons, both of a managerial, technical and technology transfer nature, can be derived from the experiences of the program managers, staff and participants. Case studies and group sessions are suggested to complement the data already collected as part of this evaluation.

5. Leadership Training

Third party delivery and community initiated development initiatives require a cadre of trained project and group leaders. We recommend that a leadership curriculum be designed in the areas of project management, management and human relations, communication, small group theory, financial reporting and extension methods. This type of program would be made available to rural residents who, upon completion, would be recognized as project managers. The courses could be delivered by the Ontario Agricultural Training Institute, Community Colleges and the University of Guelph at the Agricultural Colleges.

6. Technology Transfer

We recommend that, in future, a substantially larger share of the budget be spent on technology transfer theory research and extension training. Only one project was funded which considered adoption theory and the development of communication techniques. This area has been seriously under-studied in Canada with the result that few extension personnel and fewer researchers have a knowledge of the existing extensive empirical literature and theory. Consideration should be given to posting pertinent existing adoption, diffusion and communication studies on the AAFC website. The Canadian empirical findings on the levels of adoption, perceptions and communication media preferences of farmers should also be summarized and posted on the website.

7. Program Evaluation

We recommend that the evaluation process be significantly revised for all future programs. This will require several actions. First, evaluation must be considered as an integral component of program design and delivery. It is not a complimentary function to be initiated in a casual manner during the life of the program. Second, the evaluation should be designed at the beginning of the program and carried through by the same evaluation team from start to finish. Third, the evaluation design, the data collection procedures and the evaluation objectives must be logically consistent. Fourth, the process must be adequately financed and, finally, the individuals responsible for preparing the request for proposals must have a working knowledge of tendering procedures, program evaluation theory, data collection procedures and realistic research costs.

APPENDIX 1

STATEMENT OF WORK

APPENDIX 2

EVALUATION ISSUES AND QUESTIONS

APPENDIX 3

OVERVIEW OF GREEN PLAN PROGRAMS

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